California Regional Water Quality Control Board

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ORDER NO. R1-2006-0048
GENERAL NPDES PERMIT NO. CAG911001

WASTE DISCHARGE REQUIREMENTS FOR DISCHARGES OF HIGHLY TREATED GROUNDWATER TO SURFACE WATERS FOLLOWING EXTRACTION AND CLEANUP OF GROUNDWATER POLLUTED WITH PETROLEUM HYDROCARBONS AND VOLATILE ORGANIC COMPOUNDS

REGION ONE

This Order/General Permit was adopted by the North Coast Regional Water Quality Control Board (the Regional Water Board) on:	June 29, 2006
This Order/General Permit shall become effective on:	June 29, 2006
This Order/General Permit shall expire on:	June 29, 2011
Coverage under this Order/General Permit will be authorized only for minor discharges, as classified by the United States Environmental Protection Agency (U.S. EPA) and the Regional Water Board, which otherwise meet the criteria for authorization established herein.	

IT IS HEREBY ORDERED, that Order No. R1-2001-9 be rescinded upon the effective date of this Order subject to section VI (A)(3)(a)(i) of this Order, except for enforcement purposes, and, in order to meet the provisions contained in Division 7 of the California Water Code (CWC) and regulations adopted thereunder, and the provisions of the federal Clean Water Act (CWA), and regulations and guidelines adopted thereunder, dischargers shall comply with the requirements established herein.

I, Catherine Kuhlman, Executive Officer, do hereby certify the following is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, North Coast Region, on June 29, 2006

Catherine Kuhlman

Catherine Kuhlman
Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
REGION 1, NORTH COAST REGION

ORDER NO. R1-2006-0048
NPDES NO. CAC911001

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I. FACILITY INFORMATION

A. Industry Description

This Order (hereafter, General Permit) is intended to authorize similar discharges from groundwater treatment facilities at sites that have been impacted by releases of petroleum related organic compounds and other volatile organic compounds associated with chemical releases.

B. Pollutants of Concern

The chemical constituents of concern regulated by this General Permit include petroleum related organic compounds and other volatile organic compounds associated with petroleum and/or chemical releases, plus naturally occurring inorganic constituents that may be present in groundwater at levels, or may be concentrated by treatment to levels, that exceed the more stringent of either applicable water quality criteria for receiving (surface) waters or background receiving water levels. Applicable water quality criteria for receiving waters include those established by the *Water Quality Control Plan for the North Coast Region* (the Basin Plan) and the *California Toxics Rule* (CTR).

C. Eligible Discharges

1. Eligible Discharges

   The following discharges shall be eligible for coverage under this General Permit.

   i. This General Permit shall apply to new or existing discharges of treated groundwater, resulting from cleanup activities for petroleum products and halogenated volatile hydrocarbons, to surface waters.

   ii. Coverage under this General Permit will be authorized only for minor discharges (as classified by the U.S. EPA and the Regional Water Board), which otherwise meet the criteria for authorization established herein.

   iii. Discharges of waste from treatment facilities designed to remove pollutants from groundwaters polluted with petroleum products and halogenated volatile hydrocarbons shall be permitted to surface waters year-round with no discharge flow limitations based on the flow of the receiving water provided that the following conditions are met: [1]

      a. The discharge from the treatment facility shall be pollutant free.[2]

[1] Water Quality Control Plan, North Coast Region, p. 4-10.00:

[2] For the purposes of this General Permit, pollutants are defined as those constituents and their breakdown products that were discharged to soils and/or groundwaters that necessitated a groundwater cleanup. Pollutant-free is defined as discharges that contain no detectable levels of pollutants as analyzed in currently approved EPA or State of California methodology. Detectable

b. The discharge shall not adversely affect the beneficial uses of the receiving water.

c. The discharge is necessary because a polluted groundwater cleanup operation is required.

d. The discharge is necessary because no feasible alternative to the discharge (reinjection, reclamation, evaporation, discharge to a community wastewater treatment and disposal system, etc.) is available.

e. The discharge is regulated by NPDES Permit/Waste Discharge Requirements.

f. The discharger has demonstrated consistent compliance with Provision (a) above.

g. The discharge is in the public interest.

iv. To demonstrate eligibility for coverage under this general permit, the Discharger shall submit a Notice of Intent (NOI), including laboratory analytical results for receiving water and either the site groundwater or the treatment system effluent for all of the priority pollutants listed in Table 1A , Table 1B, and Table 2 of this Order.

a. Samples for priority pollutant analyses shall be collected concurrently with the other applicable compounds as described in Attachment A (Notice of Intent) of this Order.

b. If Dischargers discover naturally-occurring inorganic constituents in groundwater or effluent that would disqualify them from coverage under this general permit, but still wish to apply for coverage under this general permit, they must make the necessary system modifications to meet the terms of this Order before they shall be permitted to discharge. The system modifications must utilize the best practicable treatment or control to prevent a nuisance and assure the highest water quality consistent with the maximum benefit to the people of the State will be maintained.

2. Ineligible Discharges

The following discharges shall not be eligible for coverage under the General Permit.

i. Discharges that do not consist solely of highly treated groundwater resulting from cleanup activities for petroleum products and/or volatile organic

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levels are defined as chemical constituent concentrations greater than or equal to the most stringent minimum detection requirement for each pollutant identified in Table 2 of this Order.

compounds are ineligible for coverage under this permit. Discharges from treatment systems where groundwater contains inorganic constituents that are present as a result of chemical releases to soil or groundwater are not eligible for coverage under this permit. Discharges from treatment systems where naturally-occurring inorganic constituents are present and are treated with the best practicable level of control, not to exceed established effluent limitations or background receiving water levels for constituents listed in Table 1A, and where the receiving water is not listed as impaired for that constituent, are eligible under this permit provided that the discharge is consistent with all other Basin Plan requirements The Executive Officer may use discretion to deny coverage under the General Permit for any discharge from a treatment facility where groundwater is insufficiently characterized and thereby precluding a determination as to suitability for coverage under the General Permit.

ii. Discharges that contain constituents for which the receiving water is listed as impaired.

ii. Discharges that can reasonably be expected to contribute to a violation of an applicable State water quality standard.

iii. Discharges that will adversely affect a listed endangered or threatened species or their critical habitat.

iv. Discharges to interstate waters – rivers, lakes, artificial impoundments, and other waters that flow across or form a part of the boundary with other states.

II. FINDINGS

The California Regional Water Quality Control Board, North Coast Region (hereinafter the Regional Water Board) finds:

A. Background

1. On October 26, 1995, the Regional Water Board adopted Order No. 95-88 (General NPDES Permit No. CAG911001) – Waste Discharge Requirements for Discharges of Extracted and Highly Treated Groundwater Resulting from Cleanup of Groundwater Polluted with Petroleum Hydrocarbons and Volatile Organic Compounds. On January 26, 2001, the General Permit was reissued by Order No. R1-2001-9, which expired on January 26, 2006. The requirements of Order No. R1-2001-9 were automatically continued in accordance with State Water Board regulations at Title 23 California Code of Regulations, Section 2235.4; and this Order now reissues the requirements of the General Permit.

2. On September 22, 1989, a Memorandum of Agreement executed by the U.S. EPA and the State Water Resources Control Board (State Water Board) authorized and

established procedures for the State Water Board to issue general NPDES permits pursuant to NPDES regulations at 40 CFR 122.28 and 122.44.

3. NPDES regulations at 40 CFR 122.28 provide for the issuance of general NPDES permits to regulate a category of point sources, which:

   a. Involve the same or substantially similar types of operations;

   b. Discharge the same type of wastes;

   c. Require the same type of effluent limitations or operating conditions;

   d. Require similar monitoring; and,

   e. Are more appropriately regulated under a General Permit rather than individual permits.

4. CWC Section 13263 (i) authorizes the Regional Board to prescribe general waste discharge requirements for a category of discharges, which:

   a. Are produced by the same or similar operations;

   b. Involve the same or similar types of waste;

   c. Require the same or similar treatment standards; and,

   d. Are more appropriately regulated under general discharge requirements

B. Industry Description

Operations where contaminated groundwater is pumped from the ground, treated, and discharged to surface water are described as "pump-and-treat" operations. Treatment employed by such systems commonly includes air stripping and/or granular activated carbon (GAC). Within the North Coast Region approximately eight pump-and-treat operations were authorized to discharge under Order No. R1-2001-9. Contaminated groundwater at these sites resulted primarily from leaking underground storage tanks. These facilities treat on a continuous or batch basis and typically discharge between approximately 1000 to 300,000 gallons per day (gpd).

C. Legal Authorities

This General Permit is issued pursuant to CWA Section 402 and implementing regulations adopted by the U.S. EPA and the CWC, Division 7, Chapter 5.5. It shall serve as a general NPDES permit for point source discharges of highly treated groundwater to surface waters resulting from extraction and treatment of groundwater polluted with petroleum hydrocarbons and/or volatile organic compounds. This General Permit shall also serve as

Waste Discharge Requirements (WDRs) pursuant to the CWC, Division 7, Article 4, Chapter 4 for discharges that are not subject to regulation under CWA Section 402.

D. Background and Rationale for Requirements

The Regional Water Board developed the requirements of this Order based on information required by monitoring and reporting programs and experience gained through administration of Order Nos. 95-88 and R1-2001-9. Attachments A - F, which contain background information and rationale for the requirements of the General Permit, are hereby incorporated into this General Permit and, thus, constitute part of the Findings for this General Permit.

E. California Environmental Quality Act (CEQA)

This action to adopt an NPDES permit is exempt from the provisions of CEQA under section 13389 of the Water Code. In addition, CEQA implementing regulations at Title 14 California Code of Regulations, Chapter 3, Article 19 describe categorical exemptions from the requirements of CEQA – classes of projects which have been determined not to have a significant effect on the environment. Class 7, as described by the regulations, are Actions by Regulatory Agencies for Protection of Natural Resources – actions authorized by state law or local ordinance to assure the maintenance, restoration, or enhancement of a natural resource where the regulatory process involves procedures for protection of the environment. Class 8 are Actions by Regulatory Agencies for Protection of the Environment - actions authorized by state law or local ordinance to assure the maintenance, restoration, enhancement, or protection of the environment, where the regulatory process involves procedures for protection of the environment. The Regional Water Board, acting here as the lead agency pursuant to CEQA, has determined that this project (reissuance of the General NPDES Permit/Waste Discharge Requirements for pump-and-treat systems), meets the criteria of the CEQA implementing regulations for a Class 7 and/or Class 8 categorical exemption. The pump and treat systems authorized to discharge by the General NPDES Permit are a necessary component of remedial actions which address groundwater contamination. The remedial actions are regulated by the Regional Water Board in accordance with Title 23 of the California Code of Regulations, Division 3, Chapter 16, Article 11 (Corrective Action Requirements) for the purpose of restoring groundwater quality and the environment and are undertaken in a manner which assures protection of the existing environment.

F. Technology-Based Effluent Limitations

NPDES regulations at 40 CFR 122.44 (a) require permits to include applicable technology-based limitations and standards. CWA Section 402 (a) (1) and NPDES regulations at 40 CFR 125.3 authorize the use of best professional judgment (BPJ) to derive technology-based effluent limitations on a case-by-case basis where Effluent Limitations Guidelines are not available for certain industrial categories and/or pollutants of concern. Where BPJ is used, the permit writer must consider specific factors outlined at 40 CFR 125.3.

There are no applicable Effluent Limitations Guidelines (technology-based limitations established by the U.S. EPA) for groundwater pump-and-treat systems, and therefore, technology-based effluent limitations of Order No. R1-2006-0048 and previous orders have been established using BPJ.

G. Water Quality-Based Effluent Limitations

NPDES regulations at 40 CFR 122.44 (d) require permits to include water quality-based effluent limitations (WQBELs) to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of receiving waters. Where numeric water quality objectives have not been established, in accordance with 40 CFR 122.44 (d), WQBELs may be established using calculated numeric water quality criteria; using U.S. EPA water quality criteria established under CWA Section 304 (a); or using indicator parameters for the pollutants of concern.

H. Water Quality Control Plans

The Regional Water Board adopted a *Water Quality Control Plan for the North Coast Region* (the Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. Beneficial uses are designated for all waters of the North Coast Region and are designated for coastal and inland waters, wetlands, and ground waters. Beneficial uses of any water body specifically identified in the Basin Plan generally apply to its tributary streams. Applicable beneficial uses of surface waters for the North Coast Region are listed below.

- Municipal and Domestic Supply
- Agricultural Supply
- Industrial Service Supply
- Industrial Process Supply
- Groundwater Recharge
- Freshwater Replenishment
- Navigation
- Hydropower Generation
- Water Contact Recreation
- Non-Contact Water Recreation
- Commercial and Sport Fishing
- Aquaculture
- Warm Freshwater Habitat
- Cold Freshwater Habitat
- Inland Saline Water Habitat
- Estuarine Habitat
- Marine Habitat
- Wildlife Habitat
- Preservation of Areas of Special Biological Significance

- Rare, Threatened, or Endangered Species
- Migration of Aquatic Organisms
- Spawning, Reproduction, and/or Early Development
- Shellfish Harvesting
- Water Quality Enhancement
- Flood Peak Attenuation/Flood Water Storage
- Wetland Habitat
- Native American Culture
- Subsistence Fishing

The Basin Plan establishes the following beneficial uses for ground waters throughout the North Coast Region.

- Municipal and Domestic Supply
- Industrial Service Supply
- Industrial Process Supply
- Agricultural Supply
- Freshwater Replenishment
- Native American Culture

The State Water Board adopted a *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California* (Thermal Plan) on May 18, 1972, and amended this plan on September 18, 1975. This plan contains temperature objectives for inland surface waters.

The requirements of this General Permit protect all receiving water beneficial uses and specifically implement the applicable water quality control plans, described above.

I. National Toxics Rule (NTR) and California Toxics Rule (CTR)

U.S. EPA adopted the NTR on December 22, 1992 and amended it on May 4, 1995 and November 9, 1999. The CTR was adopted by the California State Water Resources Control Board (State Water Board) on May 18, 2000 and amended on February 13, 2001. These rules include water quality criteria for the priority, toxic pollutants and are applicable to discharges authorized by this Order.

J. State Implementation Policy

The State Water Board's *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP) became effective on April 28, 2000 with respect to the priority pollutant criteria promulgated for California by the U.S. EPA through the NTR and to the priority pollutant objectives established by the Regional Water Boards in their basin plans (with the exception of the provision on alternate test procedures in section 2.3 of the SIP, which became effective on May 22, 2000). The SIP became effective on May 18, 2000 with respect to the priority pollutant criteria established in the CTR. The SIP includes procedures for

determining the need for and calculating WQBELs and requires dischargers to submit data sufficient to do so.

K. Compliance Schedules and Interim Requirements

Section 2.1 of the SIP provides that, based on a discharger's request and demonstration that it is infeasible for an existing discharger to achieve immediate compliance with an effluent limitation derived from a CTR criterion, compliance schedules may be allowed in an NPDES permit. Unless an exception has been granted under Section 5.3 of the SIP, a compliance schedule may not exceed 5 years from the date that the permit is issued or reissued, nor may it extend beyond May 18, 2010 to establish and comply with CTR criterion-based effluent limitations. Where a compliance schedule for a final effluent limitation exceeds 1 year, the Order must include interim numeric limitations for that constituent or parameter. Where allowed by the Basin Plan, compliance schedules and interim effluent limitations or discharge specifications may also be granted to allow time to implement a new or revised water quality objective. The General Permit does not include compliance schedules or interim effluent limitations.

L. Antidegradation Policy

NPDES regulations at 40 CFR 131.12 require that State water quality standards include an antidegradation policy consistent with the federal policy, which is expressed at 40 CFR 131.12. State Board Resolution 68-16 establishes California's antidegradation policy, requiring that existing quality of receiving waters be maintained unless degradation is justified based on specific findings. As discussed in the Fact Sheet (Attachment F), limitations and conditions of this General Permit are consistent with the antidegradation provisions of 40 CFR 131.12 and State Board Resolution 68-16.

M. Anti-Backsliding Requirements

CWA Sections 402 (o) (2) and 303 (d) (4) and NPDES regulations at 40 CFR 122.44 (l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. Order No. R1-2006-0048 complies with all applicable anti-backsliding requirements.

N. Monitoring and Reporting

NPDES regulations at 40 CFR 122.48 require that all NPDES permits specify requirements for recording and reporting monitoring results. CWC Sections 13267 and 13383 authorize the Regional Board to require technical and monitoring reports. The attached monitoring and reporting program (MRP) (Attachment E) establishes monitoring and reporting requirements to implement federal and State requirements.

O. Standard and Special Provisions

Standard NPDES provisions, established at 40 CFR 122.41 and 122.42 and applicable to all discharges, must be included in every NPDES permit and are provided in Attachment D. The Regional Board has also included in this General Permit special provisions applicable to discharges authorized under the General Permit. A rationale for these special provisions is provided in the attached Fact Sheet (Attachment F).

P. Notification of Interested Parties

The Regional Water Board has notified dischargers authorized under the General Permit and interested agencies and persons of its intent to prescribe waste discharge requirements, effluent limitations, and other requirements for discharges of highly-treated groundwater to surface waters following extraction and cleanup of groundwater polluted with petroleum hydrocarbons and/or volatile organic compounds. Dischargers and interested parties and persons have been provided an opportunity to submit written comments and recommendations regarding waste discharge requirements, effluent limitations, and other requirements of the General Permit. Details of this notification are provided in the Fact Sheet (Attachment F) of this General Permit.

Q. Consideration of Public Comment

The Regional Water Board, in a public meeting, heard and considered all comments pertaining to waste discharge requirements, effluent limitations, and other requirements of the General Permit. Details of the public hearing are provided in the Fact Sheet (Attachment F).

III. DISCHARGE PROHIBITIONS

A. The discharge of groundwater containing constituents listed in Table 1A of this Order in excess of the background level in receiving water is prohibited.

B. The discharge of any waste, other than highly treated groundwater extracted from the site and treated, as represented by the Discharger in its Notice of Intent (NOI) or as contemplated by the Executive Officer in his/her authorization to discharge under the General Permit, is prohibited, unless the discharge is regulated by another NPDES permit or is discharged to a permitted facility.

C. In accordance with Section 5411 of the Health and Safety Code, creation of pollution, contamination, or nuisance resulting from discharges authorized under this General Permit, as those terms are defined by Section 13050 of the California Water Code, is prohibited.

D. The discharge of extracted and treated groundwater in excess of the flow rates described by the Discharger in its NOI or as authorized by the Executive Officer is prohibited.

E. Bypass or overflow of untreated or partially treated groundwater to waters of the State from the treatment system or from the collection and transport systems or from pump stations tributary to the treatment system is prohibited.

F. The discharge of any priority pollutant as listed in the CTR that would cause, have the reasonable potential to cause, or contribute to an excursion above any applicable priority pollutant criterion or objective is prohibited.

G. The discharge from the treatment facility of detectable levels of the constituents listed in Section IV. B.3 and in Table 2 of this Order is prohibited.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Basis

Effluent limitations established by this General Permit are based on the understanding that operators/owners will not be authorized to discharge under the terms of this General Permit, if contaminated/untreated groundwater contains pollutants that are associated with discharges other than petroleum materials or volatile organic compounds. The pollutants of concern in discharges from authorized facilities are therefore organic in nature and can be removed by treatment to non-detectable concentrations by available treatment technologies. Inorganic and thermal pollutants, which may be attributed only to natural, background conditions or possibly to an origin within wastewater treatment processes, cannot be present in the discharges from authorized facilities at levels which exceed applicable water quality objectives for receiving waters.

B. Pollutants with Effluent Limitations Established by the Order

This General Permit establishes effluent limitations for acute toxicity and the groups of pollutants listed below. Several individual pollutants are listed in more than one of these pollutant groups.

1. CTR Pollutants - the toxic pollutants identified as Compound Numbers 1 through 126 by the CTR at 40 CFR 131.38,

2. Title 22 Pollutants - the pollutants with drinking water primary maximum contaminant levels (MCLs) established by the State Department of Health Services at Title 22 of the California Code of Regulations, Division 4, Chapter 15, Article 4 (Primary Standards – Inorganic Chemicals) and Article 5.5 (Primary Standards – Organic Chemicals); and

3. The fuel oxygenates and pollutant parameters associated with petroleum contamination, which were specifically regulated by Order No. R1-2001-9. This set of pollutants includes the following compounds.

Methyl Tertiary Butyl Ether	MTBE

Di-isopropyl Ether	DIPE
Tertiary Amyl Methyl Ether	TAME
Ethyl Tertiary Butyl Ether	ETBE
Tertiary Butyl Alcohol	TBA
Methanol	
Ethanol	
Total Petroleum Hydrocarbons, measured as gasoline, diesel, and motor oil	TPH-D, TPH-G, and TPH-MO
Total Xylenes	

C. Effluent Limitations

1. Inorganic pollutants plus cyanide that are listed in the CTR, or for which the Department of Health Services has established primary MCLs, shall not be discharged in concentrations that exceed applicable water quality objectives from the CTR or in concentrations that exceed the MCLs, whichever are more stringent. The specific numeric effluent limitations for inorganic pollutants are presented in Tables 1A and 1B, below. For the receiving water hardness-dependent effluent limits listed in Table 1B, those effluent limits shall apply when they are more stringent than the numerical limits listed for those constituents in Table 1A...

2. Organic pollutants that are listed in the CTR, or for which the Department of Health Services has established primary MCLs, or those fuel oxygenates and pollutant parameters that were regulated by Order No. R1-2001-9 and are listed in IV. B. 3, above, shall not be discharged at detectable concentrations.

   For purposes of this General Permit, detectable concentrations of the CTR pollutants are concentrations equal to or exceeding their respective Minimum Levels (MLs) of detection as established by the State Water Board in the SIP (2005).

   For purposes of this General Permit, detectable concentrations of the Title 22 organic pollutants are concentrations equal to or exceeding their respective Detection Limits for Purposes of Reporting (DLRs), as established by the State Department of Health Services at Title 22 of the California Code of Regulations, Section 64445.1.

   For purposes of this General Permit, detectable concentrations of the fuel oxygenates and pollutant parameters that were specifically regulated by Order No. R1-2001-9 and are listed in IV. B. 3, above, are concentrations equal to or exceeding the MLs established for these pollutants by Order No. R1-2001-9.

   The specific minimum detection requirements for laboratory analysis and reporting for all organic pollutants are presented in Table 2, below.

3. Acute toxicity. There shall be no acute toxicity in treated effluent. Dischargers shall be in compliance with this limitation when the survival of aquatic organisms in a 96-hour bioassay of undiluted waste complies with the following.

   i. Minimum for any one bioassay: 90 percent survival

   Compliance with this effluent limitation shall be determined in accordance with Section V. A of the Monitoring and Reporting Program (MRP – Attachment E to the General Permit).

4. Effluent limits for discharges to specific receiving waters. For receiving waters identified by Table 3-1 of the Basin Plan, effluent limits apply for specific water quality parameters. Discharges to those waters shall meet applicable water quality objectives for specific conductance, total dissolved solids, pH, boron, dissolved oxygen, and hardness for that specific receiving water as end-of-pipe effluent limitations.

Table 1A - Numeric Effluent Limitations for Inorganic Pollutants and Cyanide

Pollutant	CAS No.	Units	Effluent Limitations [A]	
			Most Stringent CTR Water Quality Objective	Title 22 Primary MCL
Aluminum	7429905	mg/L	-	**1.0**
Antimony	7440360	µg/L	14	**6.0**
Arsenic	7440382	µg/L	150	**50**
Barium	7440393	mg/L	-	**1.0**
Beryllium	7440417	µg/L	-	**4.0**
Cadmium	7440439	µg/L	**2.3** [B]	5.0
Chromium $^{+3}$	7440473	µg/L	**190** [B]	-
Chromium $^{+6}$	18540299	µg/L	**11**	-
Chromium, total		µg/L	-	**50**
Copper	7440508	µg/L	**8.6** [B]	-
Fluoride	7782414	mg/L	-	**2.0**
Lead	7439921	µg/L	**2.8** [B]	-
Mercury	7439976	µg/L	**0.05**	2.0
Nickel	7440020	µg/L	**48** [B]	100
Nitrate (as NO_3)		mg/L	-	**45**
Nitrate + Nitrite (as N)		mg/L	-	**10**
Nitrite (as N)		mg/L	-	**1.0**
Selenium	7782492	µg/L	**5.0**	50
Silver	7440224	µg/L	**3.5** [B]	-
Thallium	7440280	µg/L	**1.7**	2.0
Zinc	7440666	µg/L	**110** [B]	-
Cyanide	57125	µg/L	**5.2**	150
Asbestos	1332214	MFL [C]	**7**	**7**

[A] **The Discharger shall comply with the most stringent effluent limitation for each pollutant**. For inorganic pollutants and cyanide, the most stringent effluent limitation will be either (1) the water quality objective from the CTR (published at 40 CFR 131.38) for protection of freshwater aquatic life or human health, or (2) the primary drinking water MCL established by the State Department of Health Services at Title 22 of the California Code of Regulations, Division 4, Chapter 15, Article 4 (Primary Standards – Inorganic Chemicals). **The most stringent effluent limitations for the inorganic pollutants and cyanide in Table 1, above, are highlighted in bold text.**

[B] The CTR water quality objective for this metal is hardness dependent; i.e., toxicity increases with decreasing hardness in the receiving water; and the figure appearing in the table is based on a receiving water hardness of 100 mg/L $CaCO_3$. The appropriate CTR water quality objective shall be based on the actual receiving water hardness at the time of monitoring and shall be determined using Table 1A, below.

[C] MFL = Million fibers (exceeding 10 µm in length) per liter

Table 1B – Most Stringent CTR Hardness Dependent Water Quality Criteria for Metals

Receiving Water Hardness (mg/L $CaCO_3$)	Most Stringent CTR Water Quality Criterion (µg/L) [A]						
	Cadmium	Chromium $^{+3}$	Copper	Lead	Nickel	Silver	Zinc
1 - 10	0.07	4.8	0.18	0.01	1.1	0.01	2.4
11 – 20	0.44	34	1.4	0.19	8.1	0.09	18
21 – 30	0.72	58	2.5	0.44	14	0.28	32
31 – 40	0.98	79	3.4	0.72	19	0.54	44
41 – 50	1.2	100	4.4	1.0	25	0.88	56
51 – 60	1.5	120	5.2	1.4	30	1.3	68
61 – 70	1.7	140	6.1	1.7	34	1.7	79
71 – 80	1.9	160	7.0	2.1	39	2.3	90
81 – 90	2.1	170	7.8	2.4	44	2.8	100
91 – 100	2.3	190	8.6	2.8	48	3.5	110
101 – 110	2.5	210	9.4	3.2	53	4.1	120
111 – 120	2.7	230	10	3.6	57	4.9	130
121 – 130	2.9	240	11	4.1	61	5.6	140
131 – 140	3.0	260	12	4.5	66	6.5	150
141 – 150	3.2	270	13	4.9	70	7.3	160
151 – 160	3.4	290	13	5.4	74	8.2	170
161 – 170	3.6	310	14	5.8	78	9.2	180
171 – 180	3.8	320	15	6.3	82	10	190
181 – 190	3.9	340	15	6.8	86	11	200
191 – 200	4.1	350	16	7.3	90	12	210
201 - 210	4.3	370	17	7.7	94	13	220
211 – 220	4.4	380	18	8.2	98	15	230
221 – 230	4.6	400	18	8.7	100	16	230
231 – 240	4.8	410	19	9.2	110	17	240
241 – 250	4.9	430	20	9.7	110	18	250
251 – 260	5.1	440	20	10	110	20	260
261 – 270	5.2	450	21	11	120	21	270
271 – 280	5.4	470	22	11	120	23	280
281 – 290	5.5	480	23	12	130	24	290
291 – 300	5.7	500	23	12	130	25	300
301 – 310	5.8	510	24	13	130	27	300
311 – 320	6.0	520	25	13	140	29	310

Table 1B – Most Stringent CTR Hardness Dependent Water Quality Criteria for Metals							
Receiving Water Hardness (mg/L $CaCO_3$)	**Most Stringent CTR Water Quality Criterion (µg/L) [A]**						
	Cadmium	**Chromium $^{+3}$**	**Copper**	**Lead**	**Nickel**	**Silver**	**Zinc**
321 – 330	6.2	540	25	14	140	30	320
331 – 340	6.3	550	26	15	140	32	330
341 – 350	6.5	570	27	15	150	33	340
351 – 360	6.6	580	27	16	150	35	350
361 – 370	6.7	590	28	16	150	37	360
371 – 380	6.9	610	29	17	160	39	360
381 – 390	7.0	620	29	17	160	41	370
391 – 400	7.2	630	30	18	170	42	380
> 400	7.3	650	31	19	170	44	390

[A] Water quality criteria are expressed as total recoverable metal and are rounded to two significant figures.

Table 2 – Numeric Effluent Minimum Detection Requirements for Organic Pollutants					
			Minimum Detection Requirements [A]		
Pollutant	CAS No.	Units	ML for CTR Pollutants	DLR for Title 22 Pollutants	ML Established by Order No. R1-2001-9
2,3,7,8 TCDD (Dioxin)	1746016	µg/L	**1.3 x 10 $^{-8}$**	5.0 x 10 $^{-6}$	-
Acrolein	107028	µg/L	**2.0**	-	-
Acrylonitrile	107131	µg/L	**2.0**	-	-
Benzene	71432	µg/L	**0.5**	0.5	-
Bromoform	75252	µg/L	**0.5**	-	-
Carbon Tetrachloride	56235	µg/L	**0.5**	0.5	-
Chlorobenzene	108907	µg/L	**0.5**	0.5	-
Chlorodibromomethane	124481	µg/L	**0.5**	-	-
Chloroethane	75003	µg/L	**0.5**	-	-
2-Chlorethylvinyl Ether	110758	µg/L	**1.0**	-	-
Chloroform	67663	µg/L	**0.5**	-	-
Cis-1,2 Dichloroethylene	156592	µg/L	-	**0.5**	-
Dichlorobromomethane	75274	µg/L	**0.5**	**-**	**-**
1,1 Dichloroethane	75343	µg/L	**0.5**	0.5	-
1,2 Dichloroethane	107062	µg/L	**0.5**	0.5	-
1,1 Dichloroethene	75354	µg/L	**0.5**	0.5	-
1,2 Dichloropropane	78875	µg/L	**0.5**	0.5	-
1,3 Dichloropropylene	542756	µg/L	**0.5**	0.5	-
Ethylbenzene	100414	µg/L	**0.5**	0.5	-
Methyl Bromide	74839	µg/L	**1.0**	-	-
Methyl Chloride	74873	µg/L	**0.5**	-	-
Methylene Chloride	75092	µg/L	**0.5**	0.5	-
Styrene	100425	µg/L	-	**0.5**	-
1,1,2,2 Tetrachloroethane	79345	µg/L	**0.5**	0.5	-
Tetrachloroethylene	127184	µg/L	**0.5**	0.5	-
Toluene	108883	µg/L	**0.5**	0.5	-
Trans-1,2 Dichloroethylene	156605	µg/L	**0.5**	0.5	-
1,1,1 Trichloroethane	71556	µg/L	**0.5**	0.5	-
1,1,2 Trichloroethane	79005	µg/L	**0.5**	0.5	-

Table 2 – Numeric Effluent Minimum Detection Requirements for Organic Pollutants					
			Minimum Detection Requirements [A]		
Pollutant	CAS No.	Units	ML for CTR Pollutants	DLR for Title 22 Pollutants	ML Established by Order No. R1-2001-9
Trichloroethylene	79016	µg/L	0.5	**0.5**	-
Trichlorofluoromethane	75694	µg/L	-	**5.0**	-
1,1,2 Trichloro-1,2,2 Trifluoroethane	76131	µg/L	-	**10**	-
Vinyl Chloride	75014	µg/L	0.5	**0.5**	-
Xylenes, total	1330207	µg/L	-	**0.5**	0.5
2 Chlorophenol	95578	µg/L	**2.0**	-	-
2,4 Dichlorophenol	120832	µg/L	**1.0**	-	-
2,4 Dimethylphenol	105679	µg/L	**1.0**	-	-
4,6 Dinitro-2-methylphenol	534521	µg/L	**5.0**	-	-
2,4 Dinitrophenol	51285	µg/L	**5.0**	-	-
2 Nitrophenol	88755	µg/L	**10**	-	-
4-Nitrophenol	100027	µg/L	**5.0**	-	-
4-Chloro-3-Methylphenol	59507	µg/L	**1.0**	-	-
Pentachlorophenol	87865	µg/L	1.0	**0.2**	-
Phenol	108952	µg/L	**1.0**	-	-
2,4,6 Trichlorophenol	88062	µg/L	**10**	-	-
Acenapthene	83329	µg/L	**0.5**	-	-
Acenapthylene	208968	µg/L	**0.2**	-	-
Anthracene	120127	µg/L	**2.0**	-	-
Benzidine	92875	µg/L	**5.0**	-	-
Benzo(a)Anthracene	56553	µg/L	**5.0**	-	-
Benzo(a)Pyrene	50328	µg/L	**2.0**	-	-
Benzo(b)Fluoranthene	205992	µg/L	**10**	-	-
Benzo(g,h,i)Perylene	191242	µg/L	**0.1**	-	-
Benzo(k)Fluoranthene	207089	µg/L	**2.0**	-	-
Bis(2-Chloroethoxy)Methane	111911	µg/L	**5.0**	-	-
Bis(2-Chloroethyl)Ether	111444	µg/L	**1.0**	-	-
Bis(2-Chloroisopropyl)Ether	39638329	µg/L	**2.0**	-	-
Bis(2-Ethylhexyl)Phthalate	117817	µg/L	5.0	**3.0**	-
4-Bromophenyl Phenyl Ether	101553	µg/L	**5.0**	-	-
Butyl Benzyl Phthalate	85687	µg/L	**10**	-	-

Table 2 – Numeric Effluent Minimum Detection Requirements for Organic Pollutants					
			Minimum Detection Requirements [A]		
Pollutant	CAS No.	Units	ML for CTR Pollutants	DLR for Title 22 Pollutants	ML Established by Order No. R1-2001-9
2-Chloronapthalene	91587	µg/L	**10**	-	-
4-Chlorophenyl Phenyl Ether	7005723	µg/L	**5.0**	-	-
Chrysene	218019	µg/L	**5.0**	-	-
Dibenzo(a,h)Anthracene	53703	µg/L	**0.1**	-	-
1,2 Dichlorbenzene	95501	µg/L	**0.5**	0.5	-
1,3 Dichlorobenzene	541731	µg/L	**0.5**	-	-
1,4 Dichlorobenzene	106467	µg/L	**0.5**	0.5	-
3,3 Dichlorobenzidine	91941	µg/L	**5.0**	-	-
Diethyl Phthalate	84662	µg/L	**2.0**	-	-
Dimethyl Phthalate	131113	µg/L	**2.0**	-	-
Di-n-Butyl Phthalate	84742	µg/L	**10**	-	-
Di-Isopropyl Ether	10823	µg/L	-	-	**0.5**
2,4 Dinitrotoluene	121142	µg/L	**5.0**	-	-
2,6 Dinitrotoluene	606202	µg/L	**5.0**	-	-
Di-n-Octyl Phthalate	117840	µg/L	**10**	-	-
1,2 Diphenylhydrazine	122667	µg/L	**1.0**	-	-
Ethanol	64175	µg/L	-	-	**5.0**
Ethyl Tertiary Butyl Ether	637923	µg/L	-	-	**0.5**
Fluoranthene	206440	µg/L	**0.05**	-	-
Fluorene	86737	µg/L	**0.1**	-	-
Hexachlorobenzene	118741	µg/L	1.0	**0.5**	-
Hexachlorobutadiene	87683	µg/L	**1.0**	-	-
Hexachlorocyclopentadiene	77474	µg/L	5.0	**1.0**	-
Hexachloroethane	67721	µg/L	**1.0**	-	-
Indeno (1,2,3-cd) Pyrene	193395	µg/L	**0.05**	-	-
Isophorone	78591	µg/L	**1.0**	-	-
Methanol	67561	mg/L	-	-	**1.0**
Methyl Tertiary Butyl Ether	1634044	µg/L		3.0	**0.5**
Napthalene	91203	µg/L	**0.2**	-	-
Nitrobenzene	98953	µg/L	**1.0**	-	-
N-Nitrosodimethylamine	62759	µg/L	**5.0**	-	-

Table 2 – Numeric Effluent Minimum Detection Requirements for Organic Pollutants					
			Minimum Detection Requirements [A]		
Pollutant	CAS No.	Units	ML for CTR Pollutants	DLR for Title 22 Pollutants	ML Established by Order No. R1-2001-9
N-Nitrosodi-n-propylamine	621647	µg/L	**5.0**	-	-
N-Nitrosodiphenylamine	86306	µg/L	**1.0**	-	-
Phenanthrene	85018	µg/L	**0.05**	-	-
Pyrene	129000	µg/L	**0.05**	-	-
Tertiary Amyl Methyl Ether	994058	µg/L	-	-	**0.5**
Tertiary Butyl Alcohol	75650	µg/L	-	-	**5.0**
1,2,4 Trichlorobenzene	120821	µg/L	1.0	**0.5**	-
Alachlor	15972608	µg/L	-	**1.0**	-
Aldrin	309002	µg/L	**0.005**	-	-
Atrazine	1912249	µg/L	-	**0.5**	-
alpha-BHC	319846	µg/L	**0.01**	-	-
beta-BHC	319857	µg/L	**0.005**	-	-
Lindane (gamma-BHC)	58899	µg/L	**0.02**	0.2	-
delta-BHC	319868	µg/L	**0.005**	-	-
Bentazon	25057890	µg/L	-	**2.0**	-
Carbofuran	1563662	µg/L	-	**5.0**	-
Chlordane	57749	µg/L	0.1	**0.1**	-
2,4 D	94757	µg/L	-	**10**	-
4,4-DDD	72548	µg/L	**0.05**	-	-
4,4-DDE	72559	µg/L	**0.05**	-	-
4,4-DDT	50293	µg/L	**0.01**	-	-
Dalapon	75990	µg/L	-	**10**	-
Di (2-ethylhexyl) Adipate	103231	µg/L	-	**5.0**	-
Dibromochloropropane	96128	µg/L	-	**0.01**	-
Dieldrin	60571	µg/L	**0.01**	-	-
Dinoseb	88857	µg/L	-	**2.0**	-
Diquat	85007	µg/L	-	**4.0**	-
alpha-Endosulfan	959988	µg/L	**0.02**	-	-
beta-Endosulfan	33213659	µg/L	**0.01**	-	-
Endosulfan Sulfate	1031078	µg/L	**0.05**	-	-
Endothall	145733	µg/L	-	**45**	-

Table 2 – Numeric Effluent Minimum Detection Requirements for Organic Pollutants

Pollutant	CAS No.	Units	Minimum Detection Requirements [A]		
			ML for CTR Pollutants	DLR for Title 22 Pollutants	ML Established by Order No. R1-2001-9
Endrin	72208	µg/L	**0.01**	0.1	-
Endrin Aldehyde	7421934	µg/L	**0.01**	-	-
Ethylene Dibromide	8003074	µg/L	-	**0.02**	-
Glyphosate	1071836	µg/L	-	**25**	-
Heptachlor	76448	µg/L	**0.01**	0.01	-
Heptachlor Epoxide	1024573	µg/L	**0.01**	0.01	-
Methoxychlor	72435	µg/L	-	**10**	-
Molinate	2212671	µg/L	-	**2.0**	-
Oxamyl	23135220	µg/L	-	**20**	-
PCBs	1336363	µg/L	**0.05**	0.5	-
Picloram	1918021	µg/L	-	**1.0**	-
Simazine	122349	µg/L	-	**1.0**	-
Thiobencarb	28249776	µg/L	-	**1.0**	-
2,4,5 TP (Silvex)	93721	µg/L	-	**1.0**	-
Toxaphene	8001352	µg/L	**0.05**	1.0	-
Total Petroleum Hydrocarbons	-	µg/L	-	-	**50**

[A] Dischargers shall comply with the most stringent minimum detection requirement for each pollutant. For organic constituents, the applicable minimum detection requirement will be either (1) the Minimum Level (ML) of detection as established by the State Water Board in the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (2005), (2) the Detection Limits for Purposes of Reporting (DLRs) as established by the State Department of Health Services at Title 22 of the California Code of Regulations, Section 64445.1, or (3) the ML established for the fuel oxygenates and certain pollutant parameters by Order No. R1-2001-9. The applicable minimum detection requirement for organic constituents in Table 2, above, are highlighted in bold text.

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations

Receiving water limitations are based on water quality objectives contained in the Basin Plan and are a required part of this General Permit. Discharges authorized by this General Permit shall not cause the following conditions in receiving waters.

1. Unless more stringent water quality objectives for dissolved oxygen are established for a specific receiving water by Table 3-1 of the Basin Plan, authorized discharges shall not cause the dissolved oxygen concentration of receiving waters to be depressed below 7.0 mg/l at any time nor below 9.0 mg/L during critical spawning and egg incubation periods. In the event that the receiving waters have background dissolved oxygen concentrations of less than these levels, discharges shall not depress dissolved oxygen concentrations below existing levels.

2. Unless more stringent water quality objectives for pH are established for a specific receiving water by Table 3-1 of the Basin Plan, authorized discharges shall not cause the pH of receiving waters to be depressed below 6.5 nor raised above 8.5. Authorized discharges shall not cause receiving water pH to change more than 0.5 pH units at any time.

3. Authorized discharges shall not cause the turbidity of receiving waters to be increased more than 20 percent above naturally occurring background levels.

4. Authorized discharges shall not cause receiving waters to contain floating materials, including, but not limited to, solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect beneficial uses.

5. Authorized discharges shall not cause receiving waters to contain taste or odor producing substances in concentrations that impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin, that cause nuisance, or that adversely affect beneficial uses.

6. Authorized discharges shall not cause coloration of receiving waters that causes nuisance or adversely affects beneficial uses.

7. Authorized discharges shall not cause bottom deposits in receiving waters to the extent that such deposits cause nuisance or adversely affect beneficial uses.

8. Authorized discharges shall not contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses of receiving waters.

9. Authorized discharges shall not cause or contribute to concentrations of biostimulants in receiving waters that promote objectionable aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses of the receiving waters.

10. Authorized discharges shall not cause receiving waters to contain toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life.

11. Discharges shall not cause alteration of natural temperature of receiving waters unless it can be demonstrated to the satisfaction of the Executive Officer that such alteration in temperature does not adversely affect beneficial uses. At no time or place shall discharges cause temperature to increase more than 5º F above natural receiving water temperature.

12. Authorized discharges shall not cause an individual pesticide or combination of pesticides to be present in concentrations that adversely affect beneficial uses of receiving waters. There shall be no bioaccumulation of pesticide concentrations found in bottom sediments or aquatic life as a result of the discharge.

13. Authorized discharges shall not cause the receiving waters to contain oils, greases, waxes, or other materials in concentrations that result in a visible film or coating on the surface of the water or on objects in the water that cause nuisance or that otherwise adversely affect beneficial uses.

14. The discharge must not cause the receiving waters or effluent to contain toxic substances in concentrations that are toxic to, degrade, or that produce detrimental physiological responses in humans or animals or cause acute or chronic toxicity in plants or aquatic life. Compliance with this objective will be determined by use of toxicity monitoring, as described in Monitoring & Reporting Program R1-2006-0048.

15. Authorized discharges shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Regional Water Board or the State Board as required by the CWA and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to CWA Section 303 or amendments thereto, the Regional Water Board will revise and modify this General Permit in accordance with the more stringent standards.

VI. PROVISIONS

A. Standard Provisions

1. Federal Standard Provisions

The Discharger shall comply with all Standard Provisions included in Attachment D of this General Permit and shall adhere to the following standard provisions applicable to General Permits from 40 CFR 122.28 (b).

a. The General Permit may be modified, revoked and reissued, or terminated in accordance with applicable requirements of NPDES regulations at 40 CFR 124.

b. The Executive Officer may require any discharger authorized by the General Permit to apply for and obtain an individual NPDES permit. Any interested person may petition the Executive Officer to take action under this paragraph. Cases where an individual NPDES permit may be required include the following.

   i. The discharger is not in compliance with the terms of the General Permit;

   ii. A change has occurred in the availability of demonstrated technology or practices for the control or abatement of pollutants applicable to the point source;

   iii. Effluent Limitation Guidelines are promulgated for the point sources covered by the General Permit;

   iv. A water quality management plan applicable to the point sources covered by the General Permit is approved;

   v. Circumstances have changed since the time of the request to be covered so that the discharger is no longer appropriately controlled under the General Permit or either a temporary or permanent reduction or elimination of the authorized discharge is necessary; or

   vi. The discharger is a significant contributor of pollutants to the receiving waters.

c. Any owner or operator authorized under the General Permit may request to be excluded from coverage by applying for an individual permit in accordance with 40 CFR 122.28 (b) (3) (iii).

d. When an individual NPDES permit is issued to an owner or operator otherwise subject to the General Permit, the applicability of the General Permit to the discharger is automatically terminated on the effective date of the individual permit.

2. Regional Water Board Standard Provisions

a. Authorization to discharge under this Order may be terminated for reasons which include, but are not limited to, the following.

i. Violation of any term or condition contained in this Order;

ii. Obtaining authorization to discharge under the Order by misrepresentation or failure to fully disclose relevant information;

iii. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge;

iv. A change in the groundwater treatment system to a configuration that is not eligible for coverage under this Order;

v. The discharge is endangering human health or the environment.

b. The U.S. EPA Administrator may request the Regional Water Board Executive Officer to require any permittee authorized to discharge waste under this General Permit to subsequently apply for and obtain an individual NPDES Permit. The Executive Officer may require any permittee authorized to discharge waste under this General Permit to subsequently apply for and obtain an individual NPDES Permit. An interested person may petition the Executive Officer or the Regional Administrator to take action under this provision. The Regional Water Board may also review and revise this General Permit at any time upon application by any person, or on the Regional Water Board's own motion.

c. If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under the federal CWA at Section 307 (a) for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitation for the pollutant in this General Permit, this General Permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition and the permittee so notified.

d. The Executive Officer may modify or revoke authorization to discharge under this General Permit if it is determined that the permittee is causing or significantly contributing to adverse impacts to the water quality and/or beneficial uses of receiving waters. In the event that the Regional Water Board's interpretation of the narrative toxicity objective is modified or invalidated by the Regional Water Board, a court decision, or a State statue or regulation, this General Permit may be revised to be consistent with the decision, statue, or regulation.

e. In addition, the Regional Water Board may consider revising this General Permit to make it consistent with any Regional Water Board decisions arising from various petitions for re-hearing, and litigation concerning the State Implementation Plan, 303 (d) list, and TMDL Program.

f. Availability. A copy of this General Permit shall be maintained at the discharging facility and be available at all times to operating personnel.

g. Change in Discharge. At least 180 days prior to an expected material change in the character, location, or volume of a discharge, the Permittee shall file with the Regional Water Board an NOI for a New Discharger. A material change includes, but is not limited to, moving the discharge to another drainage area, to a different water body, or to a disposal area, significantly removed from the original area, potentially causing different water quality or nuisance problems.

h. Monitoring and Reporting. The Regional Water Board or State Water Board may require the Permittee to establish and maintain records, make reports, install, use, and maintain monitoring equipment or methods (including, where appropriate, biological monitoring methods), sample effluent as prescribed, and provide other information as may be reasonably required.

The Permittee shall file with the Regional Water Board technical reports on self monitoring work performed according to the detailed specifications contained in any monitoring and reporting program as directed by the Regional Water Board.

Chemical, bacteriological, and bioassay analyses shall be conducted at a laboratory certified for such analyses by the California Department of Health Services Environmental Laboratory Accreditation Program (ELAP) or approved by the Executive Officer. In the event a certified laboratory is not available to the Permittee, analyses performed by a non-certified laboratory will be accepted, provided:

i. A quality assurance/ quality control program is instituted by the laboratory, and a manual containing the steps followed in this program is kept in the laboratory and made available for inspection by representatives of the Regional Water Board. The quality assurance/quality control program must conform to U.S. EPA or State Department of Health Services guidelines.

ii. The laboratory will become certified within the shortest practicable time if the State certification program is resumed.

All Discharge Monitoring Reports shall be sent to:

California Regional Water Quality Control Board
North Coast Region
5550 Skylane Blvd., Suite A
Santa Rosa, CA 95403

3. Application for Coverage Under the General Permit

Both existing and new dischargers eligible to seek coverage under the General Permit shall submit to the Executive Officer a complete NOI.

a. Deadline for Submission

Existing Dischargers

i. Dischargers that were authorized to discharge under Order No. R1-2001-9 shall retain coverage under Order No. R1-2001-9 for sixty days following the effective date of this Order. However, such existing dischargers shall submit a complete NOI for Discharges (Attachment A), demonstrating eligibility in accordance with section I.C.1 of this Order, to the Regional Water Board within sixty days following the effective date of this Order. If the Discharger does not submit a complete NOI in accordance with this section, all coverage shall cease and the discharge shall be discontinued.

New Dischargers

ii. Dischargers who are seeking authorization to discharge under the General Permit for the first time shall submit an NOI for Discharges (Attachment A) to the Regional Water Board at least 120 days prior to the planned commencement of the discharge.

b. Regional Water Board Authorization

Existing Dischargers

i. Following review of the completed NOI, the Executive Officer shall provide written notification that coverage under the General Permit will continue or that an individual permit is required for the discharge.

New Dischargers

ii. Following notice from the Regional Water Board that its NOI is complete, new dischargers shall:

- Publish public notice for one week in a newspaper of general circulation in the locality of the pump-and-treat operation, containing:
  - Name and address of the Discharger;
  - A description of the project, including its specific location;
  - A statement that the Discharger is seeking authorization from the North Coast Regional Water Quality Control Board to discharge [x] gallons per day of treated wastewater to the [name of receiving water] under the General NPDES Permit No. CAG911001, and
  - Contact information for the Regional Water Board and the Discharger to allow interested parties to submit comments or seek additional information regarding the discharge.

- Post the public notice, described immediately above, on the subject property where it can reasonably be viewed by the public.

- Distribute the public notice, described immediately above, to adjacent property owners and nearby residences and businesses.

- Provide proof of publication, posted notice, and distribution of notice, as required immediately above, to the Regional Water Board. The Regional Water Board will not act on a complete NOI until 30 days after the three forms of notice have been provided to the public.

- Following review of a completed NOI and after a 30 day public notice period, the Executive Officer shall provide written notice to new dischargers that:

  - Coverage under this General Permit is granted, or

  - Coverage under this General Permit shall be considered at a regularly scheduled Regional Water Board hearing, or

  - An individual NPDES permit is required for the discharge.

- New dischargers shall not be authorized to discharge until the Executive Officer provides written notice of authorization under this Order.

All Dischargers

iii. Pursuant to NPDES regulations at 40 CFR 122.28 (b) (2), the Executive Officer may require a discharger to comply with the conditions of this General Permit, and that Discharger is therefore obligated to meet all discharge limitations and monitoring and reporting requirements of the General Permit, even if the Discharger has not submitted an NOI to be covered by the General Permit.

c. Failure to Submit a NOI

Existing dischargers who fail to submit a complete NOI by the deadline established herein will be deemed as out of compliance with the General Permit and subject to all penalties allowable pursuant to applicable provisions of the Clean Water Act and the California Water Code including Section 13261 thereof. New dischargers will not be authorized to discharge until a complete NOI has been submitted to the Regional Water Board and the Executive Officer has given notice of authorization in accordance with Section VI. A. 3. b of this Order.

d. Contents

i. New dischargers shall submit the NOI Form for New and Existing Dischargers, including all information required by the form, which is presented as Attachment A to this Order.

ii. Existing dischargers authorized to discharge under Order No. R1-2001-9 and wishing to retain coverage under the General Permit shall submit the NOI Form for New and Existing Dischargers, including all information required by the form which is presented as Attachment A to this Order.

B. Monitoring and Reporting Program Requirements

The discharger shall comply with MRP Order No. R1-2006-0048 presented in Attachment E of this Order, and future revisions thereto.

C. Special Provisions

1. Stormwater

If applicable, authorized dischargers shall seek coverage under and comply with the requirements of State Water Board Order No. 97-03-DWQ, NPDES General Permit No. CAS000001 – Waste Discharge Requirements for Discharges of Stormwater Associated with Industrial Activities Excluding Construction Activities (1997). If this General Stormwater Permit is reissued, authorized dischargers shall seek coverage under and comply with the requirements of the most recent version of the permit.

2. Special Studies, Technical Reports, and Monitoring Requirements

a. Whole Effluent Toxicity.

In addition to a limitation for whole effluent acute toxicity established by Section IV. C. 3 of this Order, the MRP of this Order requires monitoring for whole effluent chronic toxicity to determine compliance with the Basin Plan's narrative water quality objective for toxicity.

As established by the MRP, if either the acute toxicity effluent limitation or a chronic toxicity monitoring trigger of 1 Toxicity Unit (TUc) is exceeded, the Discharger shall conduct accelerated toxicity monitoring as prescribed in Section V.A.6. of the MRP. Results of accelerated toxicity monitoring will either trigger the implementation of a Toxicity Reduction Evaluation (TRE), if toxicity persists; or it will indicate that a return to routine toxicity monitoring is justified because persistent toxicity has not been identified by accelerated monitoring.

TREs shall be conducted in accordance with the TRE Work Plan prepared by the Discharger pursuant to Section VI. C. 2. b of this Order, below. As a result of a TRE, this Order may be reopened to include a chronic toxicity limitation, a new acute toxicity limitation, and/or a limitation for a specific toxicant identified in the TRE. Additionally, if a numeric water quality objective for toxicity is adopted by

the State Water Board, this Order may be reopened to include a numeric effluent limitation for toxicity based on that objective.

b. Toxicity Reduction Evaluation Work Plan

The Discharger shall prepare, within 180 days of the effective date of this Order, and maintain, a TRE Work Plan. This Plan shall be reviewed and updated as necessary in order to remain current and appropriate for the facility and the discharge. The TRE Work Plan shall describe the steps, which the Permittee will follow, if acute or chronic toxicity is found to be persistent in effluent by accelerated toxicity monitoring as described in Section V of the MRP. The TRE Work Plan shall be prepared in accordance with the EPA guidance document: *Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations* (EPA/600/2-88/070, 1989) and shall include, at a minimum, the following items.

i. A description of the investigation and evaluation techniques that will be used to identify potential causes and sources of toxicity, effluent variability, and treatment system efficiency.

ii. A description of the facility's methods of maximizing in house treatment efficiency and good housekeeping practices.

iii. The TRE Work Plan shall include provisions to perform a Toxicity Identification Evaluation (TIE) when the source and/or identity of the toxin(s) responsible for observed toxicity are unknown. The Work Plan shall indicate whether TIEs will be performed by in-house personnel or by a contractor and shall be conducted in accordance with the following applicable guidance from the U.S. EPA's Office of Research and Development. (Documents are located at http://nepis.epa.gov/pubtitleORD.htm)

- *Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I (EPA/600/6-91-005F),*
- *Methods for Aquatic Toxicity Identifications, Phase II Procedures for Samples Exhibiting Acute and Chronic Toxicity (EPA/600/R-92/080), and*
- *Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity (EPA/600/R-92/081).*

iv. The TRE shall include an expected schedule for conducting and completing the study, including TRE initiation within 30 days following receipt of accelerated monitoring results, which require initiation of a TRE.

v. The TRE Work Plan shall include a provision to discontinue the TRE if, based on monitoring results, there is no longer consistent toxicity in the effluent.

vi. As toxic substances are identified or characterized, the TRE Work Plan shall require continued source identification steps and steps to evaluate strategies

for reducing or eliminating the toxic substances from the discharge. The TRE Work Plan shall require all reasonable steps to reduce toxicity and meet the effluent limitation for acute toxicity established by this Order and the monitoring trigger of 1.0 TUc for chronic toxicity.

The TRE Work Plan shall not require duplication of such efforts as source control, pollution prevention, and storm water control, which are undertaken as required elements of other pollution control programs; however, such efforts shall be considered as part of a TRE.

The Regional Water Board recognizes that toxicity may be episodic and identification and reduction of sources may not be successful in all circumstances. Consideration of enforcement action by the Regional Water Board will be based, in part, on the Discharger's actions and efforts to identify and control or reduce sources of toxicity in effluent.

c. Operation and Maintenance Manual

All owners or operators authorized to discharge under the General Permit shall maintain and update, as necessary, a Groundwater Treatment System Operation and Maintenance (O&M) Manual to assure efficient and effective treatment of contaminated groundwater. The O&M Manual shall address, but not limit attention to, the following.

i. The O&M manual shall specify both normal operating and critical maximum or minimum values for treatment process variables including influent concentrations, flow rates, water levels, temperatures, time intervals, and chemical feed rates.

ii. The O&M manual shall specify an inspection and maintenance schedule for active and reserve systems and shall provide a log sheet format to document inspection observations and record completion of maintenance tasks.

iii. The O&M manual shall include a Contingency and Notification Plan meeting the requirements of Regional Water Board Resolution No. 74-151, *Contingency Planning and Notification Requirements for Accidental Spills and Discharges* (July 24, 1974), which is hereby incorporated into and made a part of this General Permit. The plan shall include procedures for reporting of accidental discharges and for emergency notification of operating personnel to assure compliance with this General Permit, as well as authorization letters from the Executive Officer.

iv. The O&M manual shall specify safeguards to prevent noncompliance with limitations and requirements of the General Permit resulting from equipment failure, power loss, vandalism, or ten-year return frequency rainfall.

d. Engineering Design Report

For all new dischargers and existing dischargers with significant changes made since prior submittals to the Regional Water Board, the NOI shall be accompanied

by an Engineering Design Report that certifies the adequacy of each major component of the proposed treatment facility. The certification shall include an analysis, based on accepted engineering practice, which demonstrates that the treatment process and the physical design of the treatment components will ensure compliance with the prohibitions, effluent limitations, and other conditions of the General Permit. The report shall also certify that:

i. Adequate maintenance and testing schedules are included in the Groundwater Treatment System Treatment O&M Manual; and

ii. Sampling points are located where representative monitoring samples of process and discharge streams can be obtained. The design engineer shall affix her/his signature and engineering license number to this Engineering Design Report.

e. Granular Activated Carbon Quality Assurance / Quality Control

The Discharger shall implement a Quality Assurance /Quality Control (QA/QC) Program to assure that newly replenished granular activated carbon (GAC) in the treatment system is providing high quality effluent with respect to pH, ammonia, and inorganic constituents. Activities conducted as part of the GAC QA/QC program shall be documented in routine Discharge Monitoring Reports submitted for the facility.

3. Notice of Start Up

After receiving authorization to discharge under the General Permit and at least 7 days prior to initiating a discharge, new dischargers shall notify the Regional Water Board of the time and date for initiation of the discharge(s) authorized under the General Permit.

VII. COMPLIANCE DETERMINATION

Compliance with the effluent limitations contained in Section IV of this Order will be determined as specified below:

A. Average Monthly Effluent Limitation (AMEL)

If the average of daily discharges over a calendar month exceeds the AMEL for a given parameter, an alleged violation will be flagged and the discharger will be considered out of compliance for each day of that month for that parameter (e.g., resulting in 31 days of non-compliance in a 31-day month). The average of daily discharges over the calendar month that exceeds the AMEL for a parameter will be considered out of compliance for that month only. For purposes of Mandatory Minimum Penalties, a violation of an AMEL will be considered as one violation. Depending on the nature of the violation, the Regional Water Board may, however, pursue discretionary civil penalties for the remaining days of violation. If only a single sample is taken during the calendar month and the analytical result for that sample exceeds the AMEL, the discharger will be considered out of compliance for that calendar month. For any one calendar month during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar month.

B. Average Weekly Effluent Limitation (AWEL)

If the average of daily discharges over a calendar week exceeds the AWEL for a given parameter, an alleged violation will be flagged and the discharger will be considered out of compliance for each day of that week for that parameter, resulting in seven days of non-compliance. The average of daily discharges over the calendar week that exceeds the AWEL for a parameter will be considered out of compliance for that week only. For purposes of Mandatory Minimum Penalties, a violation of an AWEL will be considered as one violation. Depending on the nature of the violation, the Regional Water Board may, however, pursue discretionary civil penalties for the remaining days of violation. If only a single sample is taken during the calendar week and the analytical result for that sample exceeds the AWEL, the discharger will be considered out of compliance for that calendar week. For any one calendar week during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar week.

C. Maximum Daily Effluent Limitation (MDEL)

If a daily discharge exceeds the MDEL for a given parameter, an alleged violation will be flagged and the discharger will be considered out of compliance for that parameter for that one day only within the reporting period. For any 1 day during which no sample is taken, no compliance determination can be made for that day.

D. Instantaneous Minimum Effluent Limitation

If the analytical result of a single grab sample is lower than the instantaneous minimum effluent limitation for a parameter, a violation will be flagged and the discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both are lower than the instantaneous minimum effluent limitation would result in two instances of non-compliance with the instantaneous minimum effluent limitation).

E. Instantaneous Maximum Effluent Limitation.

If the analytical result of a single grab sample is higher than the instantaneous maximum effluent limitation for a parameter, a violation will be flagged and the discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both exceed the instantaneous maximum effluent limitation would result in two instances of non-compliance with the instantaneous maximum effluent limitation).

F. Six-month Median Effluent Limitation

If the median of daily discharges over any 180-day period exceeds the six-month median effluent limitation for a given parameter, an alleged violation will be flagged and the discharger will be considered out of compliance for each day of that 180-day period for that parameter. The next assessment of compliance will occur after the next sample is taken. If only a single sample is taken during a given 180-day period and the analytical result for that sample exceeds the six-month median, the discharger will be considered out of compliance for the 180-day period. For any 180-period during which no sample is taken, no compliance determination can be made for the six-month median limitation.

G. Compliance with Single-Constituent Effluent Limitations.

The discharge is out of compliance with the effluent limitation if the concentration of the pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reported Minimum Level (ML). The ML is the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method-specific sample weights, volumes and processing steps have been followed.

H. Compliance with Effluent Limitations Expressed as a Sum of Several Constituents.

The discharge is out of compliance with an effluent limitation that applies to the sum of a group of chemicals (e.g., PCBs) if the sum of the individual pollutant concentrations is greater than the effluent limitation. Individual pollutants of the group will be considered to have a concentration of zero if the constituent is reported as non-detect (ND) or Detected, but Not Quantified (DNQ).

I. Multiple Sample Data Reduction.

When determining compliance with an AMEL for priority pollutants and more than one sample result is available in a month, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of "Detected, but Not Quantified" (DNQ) or "Not Detected" (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

1. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.

2. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

Attachment B

Table 3-1. Specific Water Quality Objectives for North Coast Region

	Specific Conductance (micromhos) @ 77 F.		Total Dissolved Solids (mg/L)		Dissolved Oxygen (mg/L)			Hydrogen Ion (pH)		Hardness (mg/L)	Boron (mg/L)	
Water Body	90% Upper Limit [3]	50% Upper Limit [2]	90% Upper Limit [3]	50% Upper Limit [2]	Min	90% Lower Limit [3]	50% Lower Limit [2]	Max	Min	50% Upper Limit [2]	90% Upper Limit [3]	50% Upper Limit [2]
Lost River HA												
Clear Lake Reservoir and Upper Lost River	300	200			5.0		8.0	9.0	7.0	60	0.5	0.1
Lower Lost River	1000	700			5.0		--	9.0	7.0	--	0.5	0.1
Other Streams	250	150			7.0		8.0	8.4	7.0	50	0.2	0.1
Tule Lake	1300	900			5.0		--	9.0	7.0	400	--	--
Lower Klamath Lake	1150	850			5.0		--	9.0	7.0	400	--	--
Groundwater [4]	1100	500			--		--	8.5	7.0	250	0.3	0.2
Butte Valley HA												
Streams	150	100			7.0		9.0	8.5	7.0	30	0.1	0.0
Meiss Lake	2000	1300			7.0		8.0	9.0	7.5	100	0.3	0.1
Groundwater [4]	800	400			--		--	8.5	6.5	120	0.2	0.1
Shasta Valley HA												
Shasta River	800	600			7.0		9.0	8.5	7.0	220	1.0	0.5
Other Streams	700	400			7.0		9.0	8.5	7.0	200	0.5	0.1
Lake Shastina	300	250			6.0		9.0	8.5	7.0	120	0.4	0.2
Groundwaters [4]	800	500			--		--	8.5	7.0	180	1.0	0.3
Scott River HA												
Scott River	350	250			7.0		9.0	8.5	7.0	100	0.4	0.1
Other Streams	400	275			7.0		9.0	8.5	7.0	120	0.2	0.1
Groundwaters [4]	500	250			--		--	8.0	7.0	120	0.1	0.1
Salmon River HA												
All Streams	150	125			9.0		10.0	8.5	7.0	60	0.1	0.0
Middle Klamath River HA												
Klamath River above	425	275			7.0		10.0	8.5	7.0	60	0.3	0.2

Iron Gate Dam including Iron Gate & Copco Reservoirs												
Klamath River below Iron Gate Dam	350	275			8.0		10.0	8.5	7.0	80	0.5	0.2
Other Streams	300	150			7.0		9.0	8.5	7.0	60	0.1	0.0
Groundwaters [4]	750	600			--		--	8.5	7.5	200	0.3	0.1
Applegate River HA												
All Streams	250	175			7.0		9.0	8.5	7.0	60	--	--
Upper Trinity River HA												
Trinity River [5]	200	175			7.0		10.0	8.5	7.0	80	0.1	0.0
Other Streams	200	150			7.0		10.0	8.5	7.0	60	0.0	0.0
Claire Engle Lake and Lewiston Reservoir	200	150			7.0		10.0	8.5	7.0	60	0.0	0.0

Table 3-1. Specific Water Quality Objectives for North Coast Region (Continued)

Water Body	Specific Conductance (micromhos) @ 77 F.		Total Dissolved Solids (mg/L)		Dissolved Oxygen (mg/L)			Hydrogen Ion (pH)		Hardness (mg/L)	Boron (mg/L)	
	90% Upper Limit [3]	50% Upper Limit [2]	90% Upper Limit [3]	50% Upper Limit [2]	Min	90% Lower Limit [3]	50% Lower Limit [2]	Max	Min	50% Upper Limit [2]	90% Upper Limit [3]	50% Upper Limit [2]
Hayfork Creek												
Hayfork Creek	400	275			7.0		9.0	8.5	7.0	150	0.2	0.1
Other Streams	300	250			7.0		9.0	8.5	7.0	125	0.0	0.0
Ewing Reservoir	250	200			7.0		9.0	8.0	6.5	150	0.1	0.0
Groundwaters [4]	350	225			--		--	8.5	7.0	100	0.2	0.1
S.F. Trinity River HA												
S.F. Trinity River	275	200			7.0		10.0	8.5	7.0	100	0.2	0.0
Other Streams	250	175			7.0		9.0	8.5	7.0	100	0.0	0.0
Lower Trinity River HA												
Trinity River	275	200			8.0		10.0	8.5	7.0	100	0.2	0.0
Other Streams	250	200			9.0		10.0	8.5	7.0	100	0.1	0.0
Groundwaters [4]	200	150			--		--	8.5	7.0	75	0.1	0.1
Lower Klamath River HA												
Klamath River	300 [6]	200 [6]			8.0		10.0	8.5	7.0	75 [6]	0.5 [6]	0.2 [6]
Other Streams	200 [6]	125 [6]			8.0		10.0	8.5	6.5	25 [6]	0.1 [6]	0.0 [6]
Groundwaters [4]	300	225			--		--	8.5	6.5	100	0.1	0.0
Illinois River HA												
All Streams	200	125			8.0		10.0	8.5	7.0	75	0.1	0.0
Winchuck River HU												
All Streams	200 [6]	125 [6]			8.0		10.0	8.5	7.0	50 [6]	0.0 [6]	0.0 [6]
Smith River HU												
Smith River-Main Forks	200	125			8.0		11.0	8.5	7.0	60	0.1	0.1
Other Streams	150 [6]	125 [6]			7.0		10.0	8.5	7.0	60 [6]	0.1 [6]	0.0 [6]
Smith River Plain HSA												
Smith River	200 [6]	150 [6]			8.0		11.0	8.5	7.0	60[6]	0.1 [6]	0.0 [6]
Other Streams	150 [6]	125 [6]			7.0		10.0	8.5	6.5	60 [6]	0.1 [6]	0.0 [6]
Lakes Earl & Talawa	--	--			7.0		9.0	8.5	6.5	--	--	--
Groundwaters [4]	350	100			--		--	8.5	6.5	75	1.0	0.0
Crescent City Harbor	--	--										
Redwood Creek HU												
Redwood Creek	220 [6]	125 [6]	115 [6]	75 [6]	7.0	7.5	10.0	8.5	6.5			
Mad River HU												
Mad River	300 [6]	150 [6]	160 [6]	90 [6]	7.0	7.5	10.0	8.5	6.5			
Eureka Plain HU												
Humboldt Bay	--	--	--	--	6.0	6.2	7.0	8.5	[7]			
Eel River HU												
Eel River	375 [6]	225 [6]	275 [6]	140 [6]	7.0	7.5	10.0	8.5	6.5			
Van Duzen River	375	175	200	100	7.0	7.5	10.0	8.5	6.5			
South Fork Eel River	350	200	200	120	7.0	7.5	10.0	8.5	6.5			
Middle Fork Eel River	450	200	230	130	7.0	7.5	10.0	8.5	6.5			
Outlet Creek	400	200	230	125	7.0	7.5	10.0	8.5	6.5			

Table 3-1. Specific Water Quality Objectives for North Coast Region (Concluded)

Water Body	Specific Conductance (micromhos) @ 77 F.		Total Dissolved Solids (mg/L)		Dissolved Oxygen (mg/L)			Hydrogen Ion (pH)		Hardness (mg/L)	Boron (mg/L)	
	90% Upper Limit [3]	50% Upper Limit [2]	90% Upper Limit [3]	50% Upper Limit [2]	Min	90% Lower Limit [3]	50% Lower Limit [2]	Max	Min	50% Upper Limit [2]	90% Upper Limit [3]	50% Upper Limit [2]
Cape Mendocino HU												
Bear River	390 [6]	255 [6]	240 [6]	150 [6]	7.0	7.5	10.0	8.5	6.5			
Mattole River	300 [6]	170 [6]	170 [6]	105 [6]	7.0	7.5	10.0	8.5	6.5			
Mendocino Coast HU												
Ten Mile River	--	--	--	--	7.0	7.5	10.0	8.5	6.5			
Noyo River	185 [6]	150 [6]	120 [6]	105 [6]	7.0	7.5	10.0	8.5	6.5			
Jug Handle Creek	--	--	--	--	7.0	7.5	10.0	8.5	6.5			
Big River	300 [6]	195 [6]	190 [6]	130 [6]	7.0	7.5	10.0	8.5	6.5			
Albion River	--	--	--	--	7.0	7.5	10.0	8.5	6.5			
Navarro River	285 [6]	250 [6]	170 [6]	150 [6]	7.0	7.5	10.0	8.5	6.5			
Garcia River	--	--	--	--	7.0	7.5	10.0	8.5	6.5			
Gualala River	--	--	--	--	7.0	7.5	10.0	8.5	6.5			
Russian River HU												
(upstream) [8]	320	250	170	150	7.0	7.5	10.0	8.5	6.5			
(downstream) [9]	375 [6]	285 [6]	200 [6]	170 [6]	7.0	7.5	10.0	8.5	6.5			
Laguna de Santa Rosa	--	--	--	--	7.0	7.5	10.0	8.5	6.5			
Bodega Bay	--	--	--	--	6.0	6.2	7.0	8.5	[7]			
Coastal Waters [10]	--	--	--	--	[11]	[11]	[11]	[12]	12			

[1] Water bodies are grouped by hydrologic unit (HU), hydrologic area (HA), or hydrologic subarea (HAS).

[2] 50% upper and lower limits represent the 50 percentile values of the monthly means for a calendar year. 50% or more of the monthly means must be less than or equal to an upper limit and greater than or equal to a lower limit.

[3] 90% upper and lower limits represent the 90 percentile values for a calendar year. 90% or more of the values must be less than or equal to an upper limit and greater than or equal to a lower limit.

[4] Value may vary depending on the aquifer being sampled. This value is the result of sampling over time, and as pumped, from more than one aquifer.

[5]

Daily Average Not to Exceed	Period	River Reach
60°F	July 1–Sept. 14	Lewiston Dam to Douglas City Bridge
56°F	Sept. 15–Oct. 1	Lewiston Dam to Douglas City Bridge
56°F	Oct. 1–Dec. 31	Lewiston Dam to confluence of North Fork Trinity River

[6] Does not apply to estuarine areas.

[7] pH shall not be depressed below natural background levels.

[8] Russian River (upstream) refers to the mainstem river upstream of its confluence with Laguna de Santa Rosa.

[9] Russian River (downstream) refers to the minstem river downstream of its confluence with Laguna de Santa Rosa.

[10] The State's Ocean Plan applies to all North Coast Region coastal waters.

[11] Dissolved oxygen concentrations shall not at any time be depressed more than 10 percent from that which occurs naturally.

[12] pH shall not be changed at any time more than 02 units from that which occurs naturally.

-- No water body specific objective available.

ATTACHMENT C – DEFINITIONS

Average Monthly Effluent Limitation (AMEL): the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Average Weekly Effluent Limitation (AWEL): the highest allowable average of daily discharges over a calendar week (Sunday through Saturday), calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Daily Discharge: Daily Discharge is defined as either: (1) the total mass of the constituent discharged over the calendar day (12:00 am through 11:59 pm) or any 24-hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit), for a constituent with limitations expressed in units of mass or; (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g., concentration).

The daily discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day or other 24-hour period defined as a day) or by the arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

For composite sampling, if 1 day is defined as a 24-hour period other than a calendar day, the analytical result for the 24-hour period will be considered as the result for the calendar day in which the 24-hour period ends.

Effective Concentration (EC): The EC is a point estimate of the toxicant concentration that would cause an adverse effect on a quantal (all-or-nothing) response (such as death, immobilization, or serious incapacitation) in a given percent of the test organisms. If the effect is death or immobility, the term lethal concentration (LC) may be used. EC values may be calculated using point estimation techniques such as probit, logit, and Spearman-Karber. EC25 is the concentration of toxicant (in percent effluent) that cause a response in 25 percent of the test organisms.

Inhibition Concentration (IC): The IC is a point estimate of the toxicant concentration that would cause a given percent reduction in a non-lethal, non-quantal biological measurement, such as growth. For example, an IC25 is the estimated concentration of toxicant that would cause a 25 percent reduction in average young per female or growth. IC values may be calculated using a linear interpolation method such as EPA's Bootstrap procedure.

Instantaneous Maximum Effluent Limitation: the highest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous maximum limitation).

Instantaneous Minimum Effluent Limitation: the lowest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous minimum limitation).

Maximum Daily Effluent Limitation (MDEL): the highest allowable daily discharge of a pollutant.

Minimum Level (ML): The Minimum Level is the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

No Observed Effect Concentration (NOEC): The NOEC is the highest tested concentration of an effluent or a toxicant at which no adverse effects are observed on the aquatic test organisms at a specific time of observation.

No Observed Effect Level (NOEL): For compliance determination the NOEL equals IC25 or EC25. If the IC25 and EC25 cannot be statistically determined, the NOEL shall be equal to the NOEC derived using a statistical analysis (hypothesis testing).

Six-month Median Effluent Limitation: the highest allowable moving median of all daily discharges for any 180-day period.

TUc (chronic toxicity unit): TUc equals 100 / NOEL (e.g., if NOEL = 100, then chronic toxicity = 1 TUc)

Attachment D – Federal Standard Provisions

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

1. The Discharger must comply with all of the conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code (CWC) and is grounds for enforcement action, for permit termination, revocation and reissuance, or denial of a permit renewal application [*40 CFR §122.41(a)*].

2. The Discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not been modified to incorporate the requirement [*40 CFR §122.41(a)(1)*].

B. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a Discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order [*40 CFR §122.41(c)*].

C. Duty to Mitigate

The Discharger shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment [*40 CFR §122.41(d)*].

D. Proper Operation and Maintenance

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by a Discharger only when necessary to achieve compliance with the conditions of this Order [*40 CFR §122.41(e)*].

E. Property Rights

1. This Order does not convey any property rights of any sort or any exclusive privileges [*40 CFR §122.41(g)*].

2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of State or local law or regulations [*40 CFR §122.5(c)*].

F. Inspection and Entry

The Discharger shall allow the Regional Water Quality Control Board (RWQCB), State Water Resources Control Board (SWRCB), United States Environmental Protection Agency (USEPA), and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to [*40 CFR §122.41(i)*] [*CWC 13383(c)*]:

1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order [*40 CFR §122.41(i)(1)*];

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order [*40 CFR §122.41(i)(2)*];

3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order [*40 CFR §122.41(i)(3)*];

4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the CWC, any substances or parameters at any location [*40 CFR §122.41(i)(4)*].

G. Bypass

1. Definitions

   a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility [*40 CFR §122.41(m)(1)(i)*].

   b. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production [*40 CFR §122.41(m)(1)(ii)*].

2. Bypass not exceeding limitations – The Discharger may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance I.G.3 and I.G.5 below [*40 CFR §122.41(m)(2)*].

3. Prohibition of bypass – Bypass is prohibited, and the Regional Board may take enforcement action against a Discharger for bypass, unless [*40 CFR §122.41(m)(4)(i)*]:

   a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage [*40 CFR §122.41(m)(4)(A)*];

b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance [*40 CFR §122.41(m)(4)(B)*]; and

c. The Discharger submitted notice to the Regional Board as required under Standard Provision – Permit Compliance I.G.5 below [*40 CFR §122.41(m)(4)(C)*].

4. The Regional Board may approve an anticipated bypass, after considering its adverse effects, if the Regional Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above [*40 CFR §122.41(m)(4)(ii)*].

5. Notice

a. Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit a notice, if possible at least 10 days before the date of the bypass [*40 CFR §122.41(m)(3)(i)*].

b. Unanticipated bypass. The Discharger shall submit notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below [*40 CFR §122.41(m)(3)(ii)*].

H. Upset

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation [*40 CFR §122.41(n)(1)*].

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph H.2 of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review [*40 CFR §122.41(n)(2)*].

2. Conditions necessary for a demonstration of upset. A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that [*40 CFR §122.41(n)(3)*]:

a. An upset occurred and that the Discharger can identify the cause(s) of the upset [*40 CFR §122.41(n)(3)(i)*];

b. The permitted facility was, at the time, being properly operated [*40 CFR §122.41(n)(3)(i)*];

c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b [*40 CFR §122.41(n)(3)(iii)*]; and

d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above [*40 CFR §122.41(n)(3)(iv)*].

3. Burden of proof. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof [*40 CFR §122.41(n)(4)*].

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition [*40 CFR §122.41(f)*].

B. Duty to Reapply

If the Discharger wishes to continue an activity regulated by this Order after the expiration date of this Order, the Discharger must apply for and obtain a new permit [*40 CFR §122.41(b)*].

C. Transfers

This Order is not transferable to any person except after notice to the Regional Board. The Regional Board may require modification or revocation and reissuance of the Order to change the name of the Discharger and incorporate such other requirements as may be necessary under the CWA and the CWC [*40 CFR §122.41(l)(3)*] [*40 CFR §122.61*].

III. STANDARD PROVISIONS – MONITORING

A. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity [*40 CFR §122.41(j)(1)*].

B. Monitoring must be conducted according to test procedures under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503 unless other test procedures have been specified in this Order [*40 CFR §122.41(j)(4)*] [*40 CFR §122.44(i)(1)(iv)*].

IV. STANDARD PROVISIONS – RECORDS

A. The Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date

of the sample, measurement, report or application. This period may be extended by request of the Regional Board Executive Officer at any time [*40 CFR §122.41(j)(2)*].

B. Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements [*40 CFR §122.41(j)(3)(i)*];

2. The individual(s) who performed the sampling or measurements [*40 CFR §122.41(j)(3)(ii)*];

3. The date(s) analyses were performed [*40 CFR §122.41(j)(3)(iii)*];

4. The individual(s) who performed the analyses [*40 CFR §122.41(j)(3)(iv)*];

5. The analytical techniques or methods used [*40 CFR §122.41(j)(3)(v)*]; and

6. The results of such analyses [*40 CFR §122.41(j)(3)(vi)*].

C. Claims of confidentiality for the following information will be denied [*40 CFR §122.7(b)*]:

1. The name and address of any permit applicant or Discharger [*40 CFR §122.7(b)(1)*]; and

2. Permit applications and attachments, permits and effluent data [*40 CFR §122.7(b)(2)*].

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

The Discharger shall furnish to the Regional Board, SWRCB, or USEPA within a reasonable time, any information which the Regional Board, SWRCB, or USEPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Discharger shall also furnish to the Regional Board, SWRCB, or USEPA copies of records required to be kept by this Order [*40 CFR §122.41(h)*] [*CWC 13267*].

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Regional Board, SWRCB, and/or USEPA shall be signed and certified in accordance with paragraph (2.) and (3.) of this provision [*40 CFR §122.41(k)*].

2. All permit applications shall be signed as follows:

   a. For a corporation: By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making

functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures [*40 CFR §122.22(a)(1)*];

b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively [*40 CFR §122.22(a)(2)*]; or

c. For a municipality, State, federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of USEPA) [*40 CFR §122.22(a)(3)*].

3. All reports required by this Order and other information requested by the Regional Board, SWRCB, or USEPA shall be signed by a person described in paragraph (b) of this provision, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

   a. The authorization is made in writing by a person described in paragraph (2.) of this provision [*40 CFR §122.22(b)(1)*];

   b. The authorization specified either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company (a duly authorized representative may thus be either a named individual or any individual occupying a named position) [*40 CFR §122.22(b)(2)*]; and

   c. The written authorization is submitted to the Regional Board, SWRCB, or USEPA [*40 CFR §122.22(b)(3)*].

4. If an authorization under paragraph (3.) of this provision is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph (3.) of this provision must be submitted to the Regional Board, SWRCB or USEPA prior to or together with any reports, information, or applications, to be signed by an authorized representative [40 CFR §122.22(c)].

5. Any person signing a document under paragraph (2.) or (3.) of this provision shall make the following certification:

   "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations" [*40 CFR §122.22(d)*].

C. Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program in this Order [*40 CFR §122.41(l)(4)*].

2. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Board [*40 CFR §122.41(l)(4)(ii)*].

3. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order [*40 CFR §122.41(l)(4)(iii)*].

D. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order, shall be submitted no later than 14 days following each schedule date [*40 CFR §122.41(l)(5)*].

E. Twenty-Four Hour Reporting

1. The Discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance [*40 CFR §122.41(l)(6)(i)*].

2. The following shall be included as information that must be reported within 24 hours under this paragraph [*40 CFR §122.41(l)(6)(ii)*]:

a. Any unanticipated bypass that exceeds any effluent limitation in this Order [*40 CFR §122.41(l)(6)(ii)(A)*].

b. Any upset that exceeds any effluent limitation in this Order [*40 CFR §122.41(l)(6)(ii)(B)*].

c. Violation of a maximum daily discharge limitation for any of the pollutants listed in this Order to be reported within 24 hours [*40 CFR §122.41(l)(6)(ii)(C)*].

3. The Regional Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours [*40 CFR §122.41(l)(6)(iii)*].

F. Planned Changes

The Discharger shall give notice to the Regional Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when [*40 CFR §122.41(l)(1)*]:

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR §122.29(b) [*40 CFR §122.41(l)(1)(i)*]; or

2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in this Order nor to notification requirements under 40 CFR Part 122.42(a)(1) (see Additional Provisions—Notification Levels VII.A.1) [*40 CFR §122.41(l)(1)(ii)*].

3. The alteration or addition results in a significant change in the Discharger's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan [*40 CFR §122.41(l)(1)(iii)*].

G. Anticipated Noncompliance

The Discharger shall give advance notice to the Regional Board or SWRCB of any planned changes in the permitted facility or activity that may result in noncompliance with General Order requirements [*40 CFR §122.41(l)(2)]*.

H. Other Noncompliance

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting E.3, E.4, and E.5 at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E [*40 CFR §122.41(l)(7)*].

I. Other Information

When the Discharger becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Regional Board, SWRCB, or USEPA, the Discharger shall promptly submit such facts or information [*40 CFR §122.41(l)(8)*].

VI. STANDARD PROVISIONS – ENFORCEMENT

A. The CWA provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed $25,000 per day for each violation. The CWA provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of $2,500 to $25,000 per day of violation, or imprisonment of not more than one (1) year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than $50,000 per day of violation, or by imprisonment of not more than two (2) years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of $5,000 to $50,000 per day of violation, or imprisonment for not more than three (3) years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than $100,000 per day of violation, or imprisonment of not more than six (6) years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than $250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than $500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the Clean Water Act, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than $1,000,000 and can be fined up to $2,000,000 for second or subsequent convictions [*40 CFR §122.41(a)(2)*] [*CWC 13385 and 13387*].

B. Any person may be assessed an administrative penalty by the Regional Board for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed $10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed $25,000. Penalties for Class II violations are not to exceed $10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed $125,000 [*40 CFR §122.41(a)(3)*].

C. The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit

shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than 4 years, or both [*40 CFR §122.41(j)(5)*].

D. The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this Order, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than six months per violation, or by both [*40 CFR §122.41(k)(2)*].

Attachment F – Fact Sheet – Table of Contents

ATTACHMENT F – FACT SHEET

This Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this General Permit.

I. PERMIT INFORMATION

On October 26, 1995, the Regional Water Board adopted Order No. 95-88 (General NPDES Permit No. CAG911001) – Waste Discharge Requirements for Discharges of Extracted and Highly Treated Groundwater Resulting from Cleanup of Groundwater Polluted with Petroleum Hydrocarbons and Volatile Organic Compounds. On January 26, 2001, the General Permit was reissued by Order No. R1-2001-9, which expired on January 21, 2006. The requirements of Order No. R1-2001-9 were automatically continued in accordance with State Water Board regulations at Title 23 California Code of Regulations, Section 2235.4; and this Order now reissues the requirements of the General Permit.

II. DESCRIPTION OF TREATED GROUNDWATER DISCHARGES AND DISCHARGE REQUIREMENTS

A. Description of Wastewater and Treatment

The General Permit is intended to authorize similar discharges from groundwater treatment facilities at sites that have been impacted by releases of petroleum related organic compounds and other volatile organic compounds associated with chemical releases.

The chemical constituents of concern regulated by the General Permit include petroleum related organic compounds and other volatile organic compounds associated with petroleum and/or chemical releases, plus naturally occurring inorganic constituents that may be present in groundwater at levels, or may be concentrated by treatment to levels, that exceed applicable water quality criteria for receiving (surface) waters.

Eligible Discharges.

Waste from treatment facilities designed to remove pollutants from ground waters polluted with petroleum products and halogenated volatile hydrocarbons may be permitted to surface waters with no discharge flow limitations based on the flow of the receiving water provided that conditions are met, as specified in the *Interim Action Plan for Cleanup of Groundwaters Polluted with Petroleum Products and Halogenated Volatile Hydrocarbons* (Basin Plan, Section 4.-10.00)

The intent of the Regional Water Board is to authorize only certain similar discharges to discharge under the terms of the General Permit. Discharges that can be authorized under the General Permit must be the result of a remedial action where contaminated groundwater is being treated and then discharged to surface waters.

Owners and/or operators of facilities that cannot be authorized under the General Permit, may seek authorization from the Regional Water Board to discharge under an individual NPDES permit.

Ineligible Discharges. NPDES regulations at 40 CFR 122.28 and CWC Section 13263 (i) authorize the issuance of general NPDES permits and general waste discharge requirements to regulate a category of point sources, which involve the same or substantially similar types of operations; discharge the same type of wastes; require the same type of effluent limitations or operating conditions; require similar monitoring; and are more appropriately regulated under a General Permit rather than individual permits.

The advantage to the Regional Water Board in issuing a general permit is that a group of similar dischargers can be regulated by one permit, instead of by individual permits, thereby reducing administrative burden. The Regional Board must be assured, however, that all authorized dischargers have similarities required by the NPDES regulations and the CWC. When a proposed discharge is insufficiently characterized, or it differs in effluent character, receiving water, treatment employed, and/or other conditions/circumstances, the Regional Water Board cannot authorize coverage under the General Permit.

In accordance with NPDES regulations at 40 CFR 122.46, the General Permit must be effective for a fixed term not exceeding five years.

B. Discharge Points and Receiving Waters

The Basin Plan designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. Beneficial uses are designated for all waters of the North Coast Region and are designated for coastal and inland waters, wetlands, and ground waters. Beneficial uses of any water body specifically identified in the Basin Plan generally apply to its tributary streams. Applicable beneficial uses of surface waters for the North Coast Region are listed below.

- Municipal and Domestic Supply
- Agricultural Supply
- Industrial Service Supply
- Industrial Process Supply
- Groundwater Recharge
- Freshwater Replenishment
- Navigation
- Hydropower Generation
- Water Contact Recreation
- Non-Contact Water Recreation
- Commercial and Sport Fishing
- Aquaculture

- Warm Freshwater Habitat
- Cold Freshwater Habitat
- Inland Saline Water Habitat
- Estuarine Habitat
- Marine Habitat
- Wildlife Habitat
- Preservation of Areas of Special Biological Significance
- Rare, Threatened, or Endangered Species
- Migration of Aquatic Organisms
- Spawning, Reproduction, and/or Early Development
- Shellfish Harvesting
- Water Quality Enhancement
- Flood Peak Attenuation/Flood Water Storage
- Wetland Habitat
- Native American Culture
- Subsistence Fishing

The Basin Plan establishes the following beneficial uses for ground waters throughout the North Coast Region.

- Municipal and Domestic Supply
- Industrial Service Supply
- Industrial Process Supply
- Agricultural Supply
- Freshwater Replenishment
- Native American Culture

C. Summary of Existing Requirements Under Order No. R1-2001-9

Many requirements of Order No. R1-2001-9 are standard provisions and are retained by Order No. R1-2006-0048. The following text highlights the less routine and substantive requirements of Order No. R1-2001-9.

1. Application Requirements

Order No. R1-2001-9 requires new and existing dischargers to submit the following materials as part of a Report of Waste Discharge when seeking coverage or seeking to retain coverage under the General Permit.

a. An Effluent Reclamation Feasibility Assessment

b. Application forms

i. State of California Form 200

ii. EPA Form 1

iii. EPA Form 2D (new dischargers)

c. Project description

d. Influent water quality characterization

e. Effluent and receiving water characterization

f. Results of chronic toxicity monitoring of treated groundwater

g. Site drawing

h. Status of the groundwater investigation

i. An Operation and Maintenance Manual (a requirement for new dischargers and existing dischargers with significant changes from prior submittals)

j. An Engineering Design/Certification Report (a requirement for new dischargers and existing dischargers with significant changes from prior submittals)

k. Copies of agency directives that require the groundwater remediation

l. Documentation of compliance with Corrective Action Requirements of the State's Underground Tank Regulations.

2. Discharge Prohibitions and Effluent Limitations

Order No. R1-2001-9 did not include specific effluent limitations but included the following discharge prohibitions.

a. The discharge of pollutants in excess of receiving water background levels is prohibited.

b. The discharge of CTR pollutants at levels, which have the reasonable potential to cause or contribute to excursions from applicable water quality objectives, is prohibited.

c. The discharge of any waste other than that described in a Report of Waste Discharge is prohibited.

d. The creation of pollution, contamination, or nuisance is prohibited.

e. Discharges in excess of flow rates described by the Report of Waste Discharge are prohibited.

f. Discharges of total petroleum hydrocarbons (TPH), seven specifically identified fuel oxygenates, the CTR pollutants, and volatile organic compounds not otherwise limited, above their respective Minimum Levels (MLs) of detection are prohibited.

3. Monitoring Requirements

a. Receiving Water Monitoring

Order No. R1-2001-9 requires receiving water monitoring at two locations (upstream and downstream of the point of discharge) in accordance with the following schedule.

Constituent	Monitoring Frequency
Temperature	Monthly
pH	Monthly
Salinity	Semi-Annually
Hardness	Semi-Annually
Metals [A]	Semi-Annually
TPH	Semi-Annually
BTEX Compounds [B]	Semi-Annually
1,2 – Dichloroethane	Semi-Annually
1,2 - Dibromomethane	Semi-Annually
Fuel Oxygenates [C]	Semi-Annually
VOCs [D]	Semi-Annually

[A] The California Action Metals

[B] Benzene, toluene, ethylbenzene, and xylenes

[C] Methyl tertiary-butyl ether, di-isopropyl ether, ethyl tertiary-butyl ether, tertiary-amyl methyl ether, tertiary-butyl alcohol, methanol, ethanol

[D] Volatile organic compounds measured by EPA Analytical methods 8021/8260, which are not otherwise listed in the table

b. Influent and Effluent Monitoring

Order No. R1-2001-9 requires influent and effluent monitoring in accordance with the following schedule.

Constituent	Monitoring Frequency
Flow [A]	Monthly Average
pH	Monthly
Hardness	Monthly
Metals [B]	Monthly
TPH	Monthly
BTEX Compounds [C]	Monthly
1,2 – Dichloroethane	Monthly
1,2 - Dibromomethane	Monthly
Fuel Oxygenates [D]	Monthly
VOCs [E]	Monthly
Chronic Toxicity	Annually
Dioxin/Furan Study [F]	First year

[A] Effluent flow only

[B] The California Action Metals

[C] Benzene, toluene, ethylbenzene, and xylenes

[D] Ethyl tertiary-butyl ether, di-isopropyl ether, ethyl tertiary-butyl ether, tertiary-amyl methyl ether, tertiary-butyl alcohol, methanol, ethanol

[E] Volatile organic compounds measured by EPA Analytical methods 8021/8260, which are not otherwise listed in the table

[F] A dioxin/furan study of effluent was required one time in the first year of coverage under the General Permit

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in the proposed Order are based on the requirements and authorities described in this section.

A. Legal Authorities

This General Permit is issued pursuant to the CWA Section 402 and implementing regulations adopted by the U.S. EPA and the CWC Chapter 5.5, Division 7. It shall serve as an NPDES permit for point source discharges resulting from discharges of highly treated groundwater resulting from cleanup activities for petroleum hydrocarbons and volatile organic compounds, which otherwise qualify for coverage under the General Permit. The General Permit also serves as Waste Discharge Requirements (WDRs) pursuant to CWC Article 4, Chapter 4 for discharges that are not subject to regulation under CWA Section 402.

B. California Environmental Quality Act (CEQA)

This action to adopt an NPDES permit is exempt from provisions of CEQA under section 13389 of the Water Code. This action to adopt a general NPDES permit for discharges of highly treated groundwater resulting from clean up actions is exempt from the provisions of the CEQA (Public Resources Code Section 21100, et seq.) as a categorical exemption pursuant to Title 14 California Code of Regulations, Chapter 3, Article 19.

CEQA implementing regulations at Title 14 California Code of Regulations, Chapter 3, Article 19 describe categorical exemptions from the requirements of CEQA – classes of projects which have been determined not to have a significant effect on the environment. Class 7, as described by the regulations, are Actions by Regulatory Agencies for Protection of Natural Resources – actions authorized by state law or local ordinance to assure the maintenance, restoration, or enhancement of a natural resource where the regulatory process involves procedures for protection of the environment. Class 8 are Actions by Regulatory Agencies for Protection of the Environment - actions authorized by state law or local ordinance to assure the maintenance, restoration, enhancement, or protection of the environment, where the regulatory process involves procedures for protection of the environment. The Regional Water Board, acting here as the lead agency pursuant to CEQA, has determined that this project (reissuance of the General NPDES Permit/Waste Discharge Requirements for pump-and-treat systems), meets the criteria of the CEQA implementing regulations for a Class 7 and/or Class 8 categorical exemption. The pump and treat systems authorized to discharge by the General NPDES Permit are a necessary component of remedial actions which address groundwater contamination. The remedial actions are regulated by the Regional Water Board in accordance with Title 23 of the California Code of Regulations, Division 3, Chapter 16, Article 11 (Corrective Action Requirements) for the purpose of restoring groundwater quality and the environment and are undertaken in a manner which assures protection of the existing environment.

C. State and Federal Regulations, Policies, and Plans

1. **Water Quality Control Plans.** The Regional Water Board adopted a *Water Quality Control Plan for the North Coast Region* (the Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. Beneficial uses are designated for all waters of the North Coast Region and are designated for coastal and inland waters, wetlands, and ground waters. Beneficial uses of any water body specifically identified in the Basin Plan generally apply to its tributary streams. Applicable beneficial uses of surface and groundwaters for the North Coast Region are described in Section II. B of this Fact Sheet.

   All beneficial uses, established by the Basin Plan for waters of the North Coast Region are assumed to be applicable for receiving waters of discharges authorized by the General Permit. The General Permit also implements all water quality objectives established by the Basin Plan for these beneficial uses. Because the municipal and domestic supply beneficial use is assumed for all receiving waters for discharges authorized by the General Permit, applicable water quality objectives include the drinking water primary maximum contaminant levels (MCLs) established by the State Department of Health Services at Title 22 of the California Code of Regulations, Division 4, Chapter 15, Article 4 (Primary Standards – Inorganic Chemicals) and Article 5.5 (Primary Standards – Organic Chemicals).

2. **Thermal Plan.** The State Water Board adopted a Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California (Thermal Plan) on May 18, 1972, and amended this plan on September 18, 1975. General Permit No. CAG911001 implements the applicable temperature objectives of the Thermal Plan.

3. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** U.S. EPA adopted the NTR on December 22, 1992 and amended it on May 4, 1995 and November 9, 1999. The CTR was adopted on May 18, 2000 and amended on February 13, 2001. These rules include water quality criteria for priority, toxic pollutants and are applicable to all discharges authorized by the General Permit.

4. **State Implementation Policy.** On March 2, 2000, State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP*).* The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the U.S. EPA through the NTR and to the priority pollutant objectives established by the Regional Water Boards in their basin plans, with the exception of the provision on alternate test procedures for individual discharges that have been approved by U.S. EPA Regional Administrator. The alternate test procedures provision was effective on May 22, 2000. The SIP became effective on May 18, 2000. The SIP includes procedures for determining the need for and calculating water quality-based effluent limitations (WQBELs), and requires dischargers to submit data sufficient to do so.

5. **Antidegradation Policy.** NPDES regulations at 40 CFR 131.12 require that State water quality standards include an antidegradation policy consistent with the federal

policy. The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16, which incorporates the requirements of the federal antidegradation policy. Resolution 68-16 requires that existing water quality be maintained unless any change is consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial use, and will not result in water quality less than that prescribed in adopted policies. In addition, discharges must utilize the best practicable treatment or control to prevent a nuisance and assure the highest water quality consistent with the maximum benefit to the people of the State will be maintained. Groundwater extraction and treatment is an available strategy for cleaning up contaminated groundwater that has the advantage of controlling contaminant migration while completing the cleanup. This Order clarifies the discharge prohibition for receiving water levels for inorganic constituents, which is consistent with the intent of the previous order. This clarification may allow for more groundwater treatment by reducing the treatment costs associated with an overly broad definition of constituents while still protecting water quality and beneficial uses. The Regional Board finds that allowing control of contaminant migration by groundwater extraction and treatment while maintaining water quality results in the maximum benefit to the people of the State and is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution 68-16.

6. **Anti-Backsliding Requirements.** CWA Sections 402 (o) (2) and 303 (d) (4) and NPDES regulations at 40 CFR 122.44 (l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. If the quality of waters equals or exceeds levels necessary to protect designated beneficial uses and water quality standards, an effluent limitation may be revised if consistent with the antidegradation policy. (33 USC § 1313(d)(4)(B).) Discharges of any constituent for which the receiving water is listed as impaired are ineligible for coverage under this General Permit. In addition, the Regional Board finds that the clarification of the discharge prohibition for receiving waters for inorganic constituents is consistent with the Basin Plan and antidegration policy as described above. Therefore, Order No. R1-2006-0048 satisfies all anti-backsliding requirements of the Clean Water Act and implementing regulations.

7. **Monitoring and Reporting Requirements.** NPDES regulations at 40 CFR 122.48 require that all NPDES permits include requirements for recording and reporting monitoring results. CWC Sections 13267 and 13383 authorize the Regional Water Boards to require technical and monitoring reports. The Monitoring and Reporting Program (MRP), which accompanies the General Permit as Attachment E of this Order, establishes monitoring and reporting requirements to implement federal and State requirements.

D. Impaired Water Bodies on CWA 303 (d) List

A discharger's application for coverage under the General Permit requires identification of receiving waters and the 303 (d) status of those waters. If a receiving water is listed as impaired [designated as such pursuant to CWA Section 303 (d)], the Regional Water Board, in its decision regarding authorization under the General Permit, will consider the receiving

water's impaired status, any total maximum daily loads (TMDLs) that have been developed in response to the 303 (d) listing, and the potential for the discharge to contribute "impairing" pollutants to the receiving water. Dischargers will be required to seek coverage under an individual NPDES permit, if their discharge may cause further degradation to a 303 (d) impaired receiving water or if their discharge under the General Permit would be inconsistent with a TMDL.

E. Other Plans, Policies, and Regulations

1. General NPDES Permits

   On September 22, 1989, a Memorandum of Agreement executed by the U.S. EPA and State Water Board authorized and established procedures for the State Water Board to issue general NPDES permits pursuant to NPDES regulations at 40 CFR 122.28 and 122.44.

   NPDES regulations at 40 CFR 122.28 provide for the issuance of general NPDES permits to regulate a category of point sources, which:

   a. Involve the same or substantially similar types of operations;
   b. Discharge the same type of wastes;
   c. Require the same type of effluent limitations or operating conditions;
   d. Require similar monitoring; and,
   e. Are more appropriately regulated under a General Permit rather than individual permits.

   CWC Section 13263 (i) authorizes the Regional Board to prescribe general waste discharge requirements for a category of discharges, which:

   a. Are produced by the same or similar operations;
   b. Involve the same or similar types of waste;
   c. Require the same or similar treatment standards; and,
   d. Are more appropriately regulated under general discharge requirements

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source discharges to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations. NPDES regulations at 40 CFR 122.44 (a) require that permits include applicable technology-based limitations and standards, and at 40 CFR 122.44 (d) require that permits include water quality-based effluent limitations to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water.

A. Discharge Prohibitions

1. *Prohibition III. A. The discharge of groundwater containing inorganic constituents identified in Table 1A in excess of the background level in receiving water is prohibited.*

   The prohibition of discharges containing constituents in excess of the background level in receiving water has been retained from Order No. R1-2001-9. This prohibition has been clarified to identify "constituents" to include inorganics listed in Table A3 of the previous permit and Table 1A of this Order.

   Effluent limitations established by this General Permit are based on the understanding that operators/owners will not be authorized to discharge under the terms of the General Permit, if contaminated/untreated groundwater contains pollutants that are not associated with petroleum materials or are not volatile organic compounds. The pollutants of concern in discharges from authorized facilities are, therefore, organic in nature; and the Regional Board has determined that such pollutants can be removed to non-detectable concentrations by available treatment technologies. If inorganic pollutants are present in untreated groundwaters, discharges from such sites will not be authorized under the General Permit, unless the inorganic pollutants are present naturally in that groundwater and unless the treatment system is capable of treating any inorganic constituents using best practicable control that are present to at least levels that achieve water quality objectives for those constituents and which also do not exceed background receiving water levels. Moreover, discharges may not exceed the background level of the receiving water for pollutants listed in Table 1A of this General Permit.

   An unqualified prohibition against discharging any constituent in excess of the background level in the receiving waters would be impractical. Groundwaters often have higher levels of naturally occurring dissolved minerals (e.g., iron, calcium, magnesium, sulfate, chloride, sodium,) oxygen, and alkalinity than surface waters, and a blanket prohibition would prohibit the discharge of such groundwaters, after treatment to remove petroleum compounds and volatile organics, only because naturally occurring dissolved solids in groundwater are present at levels higher than levels in the receiving stream. Discharges that contain naturally occurring dissolved minerals at concentrations greater than levels in receiving waters do not necessarily degrade water quality, so long as applicable water quality objectives are not exceeded. For constituents not listed in Table 1A, Order No. R1-2006-0048 addresses this issue by (1) limiting the levels of organic constituents in effluent to less than their respective MLs or DLRs and (2) by limiting the levels of inorganics in effluent to levels that do not exceed applicable water quality objectives for the receiving waters. If inorganic constituents are present in groundwater at levels higher than what occur naturally in groundwater, those discharges will be precluded from coverage under the General Permit. Practically, the limitations of Order No. R1-2006-0048 prohibit the discharge of naturally occurring dissolved minerals at levels that exceed background levels in the receiving water, as long as those levels do not exceed any applicable water quality objectives for the receiving stream. This difference between the discharge prohibition of Order No. R1-2001-9 and the effluent limitations of Order No. R1-2006-0048 will have no adverse impacts to receiving water quality and addresses the Regional Water Board's observation that many

groundwaters have higher levels of naturally occurring dissolved minerals than surface waters.

Detectable concentrations for the CTR and Title 22 pollutants are defined by the General Permit as concentrations at or above the MLs established for the CTR pollutants and the Detection Limits for Purposes of Reporting (DLRs) established for the Title 22 pollutants by the State Department of Health Services.

2. Prohibition III. B. The discharge of any waste, other than highly treated groundwater extracted from the site and treated, as represented by the Discharger in its Notice of Intent or as contemplated by the Executive Officer in his/her authorization to discharge under the General Permit, is prohibited, unless the discharge is regulated by another NPDES permit or is discharged to a permitted facility.

   NPDES regulations at 40 CFR 122.28 and CWC Section 13263 (i) authorize the issuance of general NPDES permits and general waste discharge requirements to regulate a category of point sources, which involve the same or substantially similar types of operations; discharge the same type of wastes; require the same type of effluent limitations or operating conditions; require similar monitoring; and are more appropriately regulated under a General Permit rather than individual permits.

   The advantage to the Regional Water Board in issuing a general permit is that a group of similar dischargers can be regulated by one permit, instead of by individual permits, thereby reducing some administrative burden. Before authorization to discharge under the General Permit can be granted, however, the Regional Water Board must be assured that all authorized dischargers have similarities required by the NPDES regulations and the CWC. The Regional Water Board therefore prohibits discharges which are not treated groundwater as reported by the Discharger in its NOI or as contemplated by the Regional Water Board.

3. Prohibition III. C. In accordance with Section 5411 of the Health and Safety Code, creation of pollution, contamination, or nuisance resulting from discharges authorized under this Order, as those terms are defined by Section 13050 of the California Water Code, is prohibited.

   This discharge prohibition is retained from Order No. R1-2001-9.

4. Prohibition III. D. The discharge of extracted and treated groundwater in excess of the flow rates described by the Discharger in its NOI or as authorized by the Executive Officer is prohibited.

   This discharge prohibition is retained from Order No. R1-2001-9.

5. Prohibition III. E. Bypass or overflow of untreated or partially treated groundwater to waters of the State from the treatment system or from the collection and transport systems or from pump stations tributary to the treatment system is prohibited.

   This discharge prohibition is retained from Order No. R1-2001-9.

6. Order No. R1-2001-9 included the following discharge prohibition that has been modified by Order No. R1-2006-0048.

a. The discharge of groundwater containing constituents in excess of the background level in the receiving water is prohibited.

B. Technology-Based Effluent Limitations

1. Scope and Authority.

   The CWA requires that technology-based effluent limitations be established based on several levels of controls:

   a. Best practicable treatment control technology (BPT) represents the average of the best performance by plants within an industrial category or subcategory. BPT standards apply to toxic, conventional, and non-conventional pollutants.

   b. Best available technology economically achievable (BAT) represents the best existing performance of treatment technologies that are economically achievable within an industrial point source category. BAT standards apply to toxic and non-conventional pollutants.

   c. Best conventional pollutant control technology (BCT) represents the control from existing industrial point sources of conventional pollutants including BOD, TSS, fecal coliform, pH, and oil and grease. The BCT standard is established after considering the "cost reasonableness" of the relationship between the cost of attaining a reduction in effluent discharge and the benefits that would result, and also the cost effectiveness of additional industrial treatment beyond BPT.

   d. New source performance standards (NSPS) represent the best available demonstrated control technology standards. The intent of NSPS guidelines is to set limitations that represent state-of-the-art treatment technology for new sources.

   The CWA requires the U.S. EPA to develop effluent limitations, guidelines and standards (ELGs) representing application of BPT, BAT, BCT, and NSPS for specific industrial categories. Where the U.S. EPA has not yet developed ELGs for a particular industry or a particular pollutant, Section 402 (a) (1) of the CWA and U.S. EPA regulations at 40 CFR 125.3 authorize the use of best professional judgment (BPJ) to derive technology-based effluent limitations on a case-by-case basis. When BPJ is used, the permit writer must consider specific factors outlined at 40 CFR 125.3.

2. Technology-Based Effluent Limitations

   As stated in Section IV. A of Order No. R1-2006-0048, the pollutants of concern in discharges from authorized facilities are organic in nature and can be removed to non-detectable concentrations by available treatment technologies. The Regional Water Board has therefore established an effluent limitation for organic pollutants requiring their removal to non-detectable concentrations, using BPJ, based on the observation that treatment technology, properly operated, is available to effectively reduce pollutants of concern to the non-detectable concentrations, which are defined by the Order.

Organic Pollutants, which are listed in the CTR, or for which the Department of Health Services has established primary MCLs, or those fuel oxygenates and pollutant parameters, which are listed in Section IV. B.(3) of this Order, shall not be discharged at detectable concentrations.

For purposes of this Order, detectable concentrations of the CTR pollutants are concentrations equal to or exceeding their respective Minimum Levels (MLs) of detection as established by the State Water Board in the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (2005).

For purposes of this Order, detectable concentrations of the Title 22 organic pollutants are concentrations equal to or exceeding the respective Detection Limits for Purposes of Reporting (DLRs) as established by the State Department of Health Services at Title 22 of the California Code of Regulations, Section 64445.1.

For purposes of this Order, detectable concentrations of the fuel oxygenates and pollutant parameters that are listed in Section IV. B. (3) of this Order are concentrations equal to or exceeding the MLs established for these pollutants in Table 3 of Attachment A of this Order.

C. Water Quality Based Effluent Limitations (WQBELs)

1. Scope and Authority

   NPDES regulations at 40 CFR 122.44 (d) (1) (i) require permits to include WQBELs for pollutants (including toxicity) that are or may be discharged at levels that cause, have reasonable potential to cause, or contribute to an excursion above any state water quality standard.

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

   Beneficial uses of receiving waters identified in the Basin Plan are described in Section II. B of this Fact Sheet.

   Water quality criteria applicable to these beneficial uses are included in the NTR and the CTR, which contain numeric criteria for 126 priority, toxic pollutants, and in the Basin Plan, which contains narrative and numeric criteria for several pollutants and pollutant parameters. For receiving waters with the beneficial use of municipal and domestic supply, the Basin Plan designates the primary drinking water maximum contaminant levels (MCLs) established by the Department of Health Services at Title 22 of the California Code of Regulations as applicable water quality criteria.

3. WQBELs

   As stated in Section IV. A of Order No. R1-2006-0048, effluent limitations established by the Order are based on the understanding that operators/owners will not be authorized to discharge under the terms of this Order, if contaminated/untreated groundwater contains pollutants which are not associated with petroleum materials or are not volatile organic compounds. The pollutants of

concern in discharges from authorized facilities are therefore organic in nature and can be removed to non-detectable concentrations by available treatment technologies. Inorganic pollutants in untreated groundwaters may be attributed only to natural, background conditions and cannot be present in the discharges from authorized facilities at levels which exceed applicable water quality objectives for receiving waters.

Order No. R1-2006-0048 limits concentrations of organic pollutants in effluents by the technology based effluent limitation discussed in Section IV. B, above. And, the Regional Water Board acknowledges that inorganic pollutants may be naturally occurring in groundwaters at levels that will cause or contribute to exceedances of applicable water quality criteria for receiving waters, and therefore, is establishing the following water quality based effluent limitation for these pollutants.

> *Inorganic Pollutants plus cyanide, which are listed in the CTR, or for which the Department of Health Services has established primary MCLs, shall not be discharged in concentrations that exceed applicable water quality objectives from the CTR, or that exceed the MCLs, whichever are more stringent.*

Order No. R1-2006-0048 also establishes a whole effluent, acute toxicity effluent limitation as well as monitoring requirements for acute and chronic toxicity. These requirements pertaining to whole effluent toxicity are based on the Clean Water Act and the Basin Plan. The Basin Plan includes a water quality objective for the North Coast Region that requires all waters to be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life. To assure compliance with the Basin Plan's narrative toxicity objective, this Order establishes an acute toxicity effluent limitation and requires the Discharger to conduct whole effluent toxicity testing for acute and chronic toxicity, as specified in the Monitoring and Reporting Program (Attachment E, Section V.).

The Order implements federal guidelines (U.S. EPA Regions 9 & 10 Guidelines for Implementing Whole Effluent Toxicity Testing Programs) by requiring dischargers to conduct acute toxicity tests on a fish and an invertebrate species to determine the most sensitive species. According to the U.S. EPA manual, *Methods for Estimating the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* (EPA/821-R-02-012), the acceptable vertebrate species for the acute toxicity test are the fathead minnow, *Pimephales promelas* and the rainbow trout, *Oncorhynchus mykiss.* The acceptable invertebrate species for the acute toxicity test are the water flea, *Ceriodaphnia dubia*, *Daphnia magna*, and *D. pulex.*

The Policy for Implementation of Toxic Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California requires the use of short-term chronic toxicity tests to determine compliance with the narrative toxicity objective for aquatic life in the Basin Plan. Although a chronic toxicity effluent limitation is not established by the General Permit, infrequent monitoring for chronic toxicity is required to assess compliance with the Basin Plan's narrative water quality objective

for toxicity. The General Permit includes monitoring trigger for chronic toxicity of 1.0 TUc and requires accelerated monitoring if this trigger is exceeded.

In addition to WET monitoring, Special Provisions VI. C. 2. b requires the Permittee to submit to the Regional Water Board a TRE Work Plan for approval by the Executive Officer, to ensure the Permittee has a plan to immediately move forward with a TRE, if persistent effluent toxicity is encountered.

D. Final Effluent Limitations

Final effluent limitations are established by Section IV of the General Permit.

E. Interim Effluent Limitations

The General Permit does not include interim effluent limitations.

F. Land Discharge Specifications

The General Permit does not authorize discharges to land.

G. Reclamation Specifications

The General Permit does not authorize the reclamation or reuse of treated wastewater.

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Surface Water

The Basin Plan contains numeric and narrative water quality objectives applicable to all surface waters within the North Coast Region. Water quality objectives include an objective to maintain the high quality waters pursuant to federal regulations (40 CFR 131.12) and State Water Board Resolution No. 68-16. Receiving water limitations in this General Permit are retained from the previous permit but have been updated to reflect Basin Plan objectives for inland surface waters, enclosed bays, and estuaries contained in Chapter 3 of the Basin Plan.

B. Groundwater

Groundwater limitations included in the General Permit were derived from Water Quality Objectives for Groundwaters contained in Chapter 3 of the Basin Plan.

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

NPDES regulations at 40 CFR 122.48 require permits to specify recording and reporting of monitoring results. CWC Sections 13267 and 13383 authorize the Water Boards to require technical and monitoring reports. The Monitoring and Reporting Program, Attachment E of this Order, establishes monitoring and reporting requirements to implement federal and state requirements. The following text provides the rationale for the monitoring and reporting requirements contained in the Monitoring and Reporting Program.

A. Influent Monitoring

Influent monitoring requirements of Order Nos. R1-2001-9 and R1-2006-0048 are compared in the following table.

Constituent	Monitoring Frequency	
	Order No. R1-2001-9	**Order No. R1-2006-0048**
Flow	-	Daily
pH	Monthly	-
Hardness	Monthly	-
Metals [A]	Monthly	-
TPH [B]	Monthly	-
BTEX Compounds [C]	Monthly	-
1,2 Dichloroethane	Monthly	-
1,2 Dibromomethane	Monthly	-
Fuel Oxygenates [D]	Monthly	-
Volatile Organic Compounds [E]	Monthly	-

[A] The list of California Action Metals (CAM 17)
[B] Total petroleum hydrocarbons
[C] Benzene, ethylbenzene, toluene, and xylene
[D] Methyl tertiary-butyl ether, di-isopropyl ether, tertiary-amyl methyl ether, tertiary-butyl alcohol, methanol, and ethanol
[E] VOCs not otherwise listed in the table

To become authorized to discharge under Order No. R1-2006-0048, owners/operators must fully characterize contaminated groundwater. The presence of pollutants, which are not associated with petroleum products or are not volatile organic compounds or are not naturally occurring, precludes authorization to discharge under the General Permit. The Regional Water Board, therefore, expects influent wastewater to contain BTEX compounds; 1,2 dichloroethane, which is a volatile organic compound; fuel oxygenates; volatile organic compounds; TPH; and chronic toxicity, and is not requiring monitoring of these pollutants and pollutant parameters in influent. Likewise, pH and hardness concentrations in influent may vary; however, monitoring for these parameters is not necessary to determine permit compliance and provides little insight to treatment performance relative to the burden of analysis.

As authorization to discharge under Order No. R1-2006-0048 infers that influent (untreated groundwater) has been fully characterized and the Regional Water Board expects minimal, if any, changes in groundwater quality, Order No. R1-2006-0048 requires influent monitoring only for flow. To assess groundwater remediation activity and treatment performance, the Executive Officer may require additional influent monitoring separately from the requirements of the General Permit.

B. Effluent Monitoring

Effluent monitoring requirements of Order Nos. R1-2001-9 and R1-2006-0048 are compared in the following table.

Constituent	Monitoring Frequency	
	Order No. R1-2001-9	**Order No. R1-2006-0048**
Flow	Monthly Avg	Daily

Constituent	Monitoring Frequency	
	Order No. R1-2001-9	**Order No. R1-2006-0048**
Temperature	-	Monthly
pH	Monthly	Monthly
Total Dissolved Solids	-	2x / year [A]
Specific Conductance	-	2x / year [A]
Dissolved Oxygen	-	2x / year [A]
Boron	-	2x / year [A]
Hardness	Monthly	2x / year [A]
Metals [B]	Monthly	-
TPH, BTEX Compounds, Fuel Oxygenates	Monthly	Monthly [C]
1,2 Dichloroethane	Monthly	-
1,2 Dibromomethane	Monthly	-
Volatile Organic Compounds [D]	Monthly	Monthly [E]
Acute Toxicity	-	Annually
Chronic Toxicity	Annually	2x/year
CTR Pollutants	-	2x/year
Title 22 Pollutants	-	2x/year
Dioxin/Furan Study [F]	First year	-

[A] Specific conductance, total dissolved solids, pH, boron, dissolved oxygen, and hardness shall be monitored in effluent only if the receiving water is specifically identified in Table 3-1 of the Basin Plan, and therefore, as established by Section IV. C. 4 of the General Permit, the water quality objectives for the specifically identified receiving waters are applicable as end-of-pipe effluent limitations.

[B] The list of California Action Metals (CAM 17)

[C] TPH, BTEX Compounds, and the Fuel Oxygenates shall be monitored monthly only at sites where petroleum products have impacted groundwater. Monitoring for these pollutants shall not be discontinued at any site authorized by the General Permit until the Executive Officer has provided written concurrence that petroleum products have not impacted groundwater at that site and monitoring for these pollutants may be discontinued.

[D] VOCs = volatile organic compounds = those pollutants identified as Compound Nos. 17 – 44 by the California Toxics Rule at 40 CFR 131.38 (b) and those pollutants identified as Volatile Organic Chemicals (VOCs) for which the Department of Health Services has established Maximum Contaminant Levels at Title 22 California Code of Regulations § 64444.

[E] These pollutants shall be monitored monthly at sites where volatile organic compounds, only, have impacted groundwater. Monitoring for these pollutants shall not be discontinued at any site authorized by the General Permit until the Executive Officer has provided written concurrence that volatile organic compounds, excluding those associated with petroleum products, have not impacted groundwater and monitoring for these pollutants may be discontinued.

[F] A study of dioxin and furans in effluent was required one time in dry weather and one time in wet weather in accordance with requirements established by the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California.

Differences in effluent monitoring requirements of Order Nos. R1-2001-9 and R1-2006-0048 are discussed below.

- Order No. R1-2006-0048 requires routine temperature monitoring to determine compliance with applicable water quality objectives for temperature.

- If a facility discharges to a water body specifically identified in Table 3-1 of the Basin Plan, Order No. R1-2006-0048 requires routine monitoring of effluent for total dissolved solids, specific conductance, dissolved oxygen, boron, and hardness to determine compliance with water quality objectives for these parameters, which are applied as end-of-pipe effluent limitations for those specific waters identified in Table 3-1. Facilities not specifically identified by Table 3-1 of the Basin Plan are not required to monitor for these constituents.

- Order No. R1-2006-0048 requires routine (monthly) monitoring of effluent for TPH, the BTEX compounds, and the fuel oxygenates to determine compliance with effluent limitations for these compounds and as indicators of treatment performance. Following approval by the Executive Officer, monitoring for these pollutants may be discontinued if petroleum products have not impacted groundwater.

- Order No. R1-2006-0048 does not include specific monitoring requirements for metals; 1,2 dichloroethane; and 1,2 dibromomethane. Metals are included on the CTR and Title 22 lists of pollutants. 1,2-dichloroethane is a volatile organic compound and is included on the Title 22 list of pollutants. 1,2-dibromoethane (ethylene dibromide) has been used as a gasoline additive and is included on the Title 22 of list of pollutants.

- Acute toxicity monitoring of effluent is required annually to determine compliance with the whole effluent acute toxicity limitation established by Order No. R1-2006-0048.

- Chronic toxicity monitoring of effluent is required one time every five years to determine compliance with the narrative water quality objective for toxicity expressed by the Basin Plan.

- Monitoring of the CTR and Title 22 pollutants in the effluent and in the receiving water is required two times every year to assess compliance with effluent limitations and receiving water prohibitions of Order No. R1-2006-0048. To assure protection of receiving water quality, the Regional Water Board is also relying on the NOI process which will preclude from coverage under the General Permit discharges from sites with groundwater contaminants other than volatile organics and compounds associated with petroleum products.

C. Whole Effluent Toxicity Testing Requirements

1. Acute Toxicity

   To determine compliance with the acute toxicity limitation, the General Permit establishes an annual monitoring requirement for acute toxicity. Because ground water quality typically changes very slowly over time, the Regional Water Board has determined that wastewater influent and effluent quality from authorized sites will be relatively stabile, and annual monitoring will provide a sufficient determination of compliance.

2. Chronic Toxicity

To determine compliance with the Basin Plan's narrative water quality objective for toxicity, the General Permit establishes a monitoring requirement for chronic toxicity of one time every five years, which satisfies the requirement of *The Policy for Implementation of Toxic Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* to use short-term chronic toxicity tests to determine compliance with the Basin Plan's water quality objective for toxicity. Because discharges from authorized sites are temporary, until remediation is completed, the Regional Board has determined that acute (instead of chronic) toxicity monitoring will be more meaningful in assessing compliance with the Basin Plan's narrative objective for toxicity. Although the monitoring frequency for chronic toxicity is infrequent, chronic toxicity monitoring is required within the first three days of operation of a newly authorized pump-and-treat operation. If chronic toxicity is present in effluent from a newly authorized facility, the conditions will be discovered immediately after operation is initiated and corrective steps will be taken.

A numeric chronic toxicity monitoring trigger of 1 TUc is established by the General Permit. The presence of chronic toxicity above this trigger requires accelerated monitoring and a Toxicity Reduction Evaluation if toxicity persists. Guidance regarding accelerated monitoring and TRE initiation is provided in the *Technical Support Document for Water Quality-Based Toxics Control* (TSD), EPA/505/2-90-001, March 1991. The TSD (page 118) recommends a TRE if toxicity is present repeatedly or at levels above effluent limits more than 20 percent of the time. The General Permit, therefore, requires four accelerated chronic monitoring tests. If no toxicity is demonstrated in the four accelerated tests, then it demonstrates that toxicity is not present at levels above the monitoring trigger more than 20 percent of the time (only 1 of 5 tests are toxic, including the initial test). If there is adequate evidence of a pattern of effluent toxicity, i.e., chronic toxicity is present above the monitoring trigger more than 20 percent of the time, the Executive Officer may require the Permittee to initiate a TRE.

D. Receiving Water Monitoring

1. Surface Water

The effluent limitations of Order No. R1-2006-0048 address most numeric water quality criteria, which are applicable to the receiving waters of the North Coast Region. Effluent limitations prohibit the discharge of organic pollutants in detectable concentrations; and all inorganic pollutants plus cyanide cannot be discharged at levels that exceed either background receiving levels or water quality criteria. By establishing such end-of-pipe effluent limitations for all pollutants with numeric water quality criteria applicable to receiving waters of the North Coast Region, the need for extensive receiving water monitoring is reduced, as protection of receiving water quality is determined by effluent monitoring.

Order No. R1-2006-0048 requires receiving water monitoring only to determine background conditions in receiving water and to assess compliance with receiving water limitations for temperature, pH, dissolved oxygen, and turbidity. Authorized dischargers must establish two receiving water monitoring stations - one upstream and one downstream from the point of discharge and perform routine monitoring for temperature, pH, dissolved oxygen, and turbidity in the receiving stream. Hardness

monitoring is required two times per year, during the wet and dry weather seasons, because effluent limitations for metals are hardness dependent; i.e., hardness of the receiving water must be determined to determine the appropriate effluent limitations for metals from Table 1A of the General Permit.

2. Groundwater

Although new applicants for coverage under the General Permit are required to characterize contaminated ground water to determine suitability for coverage under the General Permit, groundwater monitoring is not otherwise required by the General Permit and its Monitoring and Reporting Program.

VII. RATIONALE FOR PROVISIONS

A. Standard Provisions

1. Standard Provisions

Standard Provisions, which in accordance with 40 CFR 122.41and 122.42, apply to all NPDES discharges and must be included in every NPDES permit, are provided in Attachment D to this General Permit.

2. Regional Board Standard Provisions

Regional Water Board Standard Provisions are based on the Clean Water Act, U.S. EPA regulations, and the California Water Code.

3. Application for Coverage Under the General Permit

a. Deadline for Submission of an NOI

The deadlines for submitting applications for coverage under the General Permit, for new and existing dischargers, are retained from Order No. R1-2001-9. Existing dischargers, must submit an NOI within 120 days of the effective date of Order No. R1-2006-0048; and new dischargers must submit an NOI at least 120 days before the anticipated start date of the discharge.

b. Failure to Submit and NOI

Existing dischargers who fail to submit a complete NOI by the deadline established herein will be viewed as out of compliance with the General Permit and subject to all penalties allowable pursuant to applicable provisions of the Clean Water Act and the California Water Code including Section 13261 thereof. New dischargers will not be authorized to discharge until a complete NOI has been submitted to the Regional Water Board and the Executive Officer has given notice of authorization in accordance with Section VI. A. 3. b of the Order.

c. NOI – Required Information

The NOI forms for existing and new dischargers are intended to provide the Regional Water Board with information necessary for a determination of

suitability for coverage or continued coverage under the General Permit, and adequate information to implement the permit requirements. The information required to complete an NOI meets the requirements for NOIs established at 40 CFR 122.28 (b) (2) and satisfies the requirements for a Report of Waste Discharge established by CWC Section 13260. [See California Form 200 at http://www.swrcb.ca.gov/sbforms/], which states that a Report of Waste Discharge pursuant to CWC Section 13260 is required to start the application process for all waste discharge requirements and NPDES permits, except for general waste discharge requirements or general NPDES permits that use a Notice of Intent to comply or specify the use of an alternative application form designed for that permit.

Order No. R1-2006-0048 requires completion of a single NOI form for both new and existing dischargers as application for coverage under the General Permit and replaces the requirements of Order No. R1-2001-9 for new and existing dischargers to provide State of California Form 200 and U.S. EPA Application Forms 1 and 2D as application for coverage. The requirement to provide a single application form for both new and existing dischargers represents a less burdensome procedure for applicants and the Regional Water Board, while requiring submittal of all necessary information pursuant to NPDES regulations at 40 CFR 122.28 (b) (2) and CWC Section 13260. The NOI forms for new and existing dischargers require the following information.

NOI for New Dischargers

- Facility Information. The NOI requires basic information: facility name, address and contact; owner and operator; points of discharge; and a location map and site drawing.

- Project Description.

- Groundwater and Receiving Water Characterization. The purpose of characterizing polluted groundwater, before treatment, is to determine suitability for coverage under the General Permit. If pollutants, which are not volatile organic compounds or which are not associated with petroleum products, are present in untreated groundwater above naturally occurring levels, the discharge is not suitable for coverage under the General Permit.

  Proper characterization requires sampling and analysis of untreated/polluted groundwater and the receiving water. The Regional Water Board expects that groundwater at most sites seeking coverage under the General Permit has been fully characterized for purposes of the remedial action. Such data can be used to complete the requirements of the NOI.

The NOI form requires chemical characterization of groundwater and of the receiving water for the following sets of pollutants.

CTR Pollutants	The toxic pollutants listed by the California Toxics Rule (CTR) at 40 CFR 131.38
Title 22 Pollutants	The pollutants with drinking water primary maximum contaminant levels (MCLs) established by the State Department of Health Services at Title 22 of the California Code of Regulations, Division 4, Chapter 15, Article 4 (Primary Standards – Inorganic Chemicals) and Article 5.5 (Primary Standards – Organic Chemicals)
Fuel Oxygenates	Methyl tertiary-butyl ether (MTBE), di-isopropyl ether (DIPE), tertiary-amyl methyl ether (TAME), ethyl tertiary-butyl ether (ETBE), tertiary-butyl alcohol (TBA), methanol, and ethanol
TPH	Total petroleum hydrocarbons

Analysis for the CTR and Title 22 pollutants are necessary, because the U.S. EPA and the State Department of Health Services have established applicable water quality objectives for these pollutants. The fuel oxygenates are pollutants of concern because these compounds are often present with petroleum products; and TPH is a broad indicator of petroleum contamination.

A complete NOI requires the presentation of analytical data to include, for each pollutant:

i. The method detection limit

ii. The reporting limit or the reporting detection limit, and

iii. The highest reported concentration

- Receiving Water Characterization. The NOI requires owners and operators to understand applicable water quality objectives and limitations for their specific receiving waters. Specifically:

  i. Receiving water hardness must be reported, as the toxicity of many metals increases with decreasing hardness. The General Permit requires authorized dischargers to meet all applicable water quality objectives for metals, as effluent limitations.

  ii. Table 3-1 of the Basin Plan includes water quality objectives for specific conductance, total dissolved solids, pH, boron, dissolved oxygen, and hardness for several specifically named receiving waters in the North Coast Region. If discharges are authorized to one of these specifically named receiving streams, the General Permit requires authorized dischargers to meet the applicable water quality objectives for specific conductance, total dissolved solids, pH, boron, dissolved oxygen, and hardness, as effluent limitations.

iii. Discharges to receiving waters listed as impaired pursuant to Section 303 (d) of the Clean Water Act may not be authorized under the General Permit, if the receiving water is impaired for a pollutant or pollutant parameter that is specifically limited by the General Permit. Dischargers can learn of the 303 (d) listing status of receiving waters at http://www.waterboards.ca.gov/tmdl/303d_lists.html.

iv. Status of Groundwater Investigation

- Plans, Reports, Manuals. Order No. R1-2006-0048 retains the requirement of Order No. R1-2001-9 for new dischargers to submit an Operation and Maintenance Manual and an Engineering Design Report as part of its NOI. An NOI cannot be viewed as complete until these documents are submitted to the Regional Water Board.

  The NOI also requires new dischargers to submit a Toxicity Reduction Evaluation Workplan as part of its NOI. The Regional Water Board considers the measurement of whole effluent toxicity to be a good indicator regarding the presence of toxic pollutants in effluent. Dischargers must prepare the workplan to address circumstances of toxicity in effluent, even if toxicity may be attributable to components of the treatment process or toxicity testing procedures.

Notice of Intent for Existing Dischargers

- Facility Information.

  The NOI requires basic, updated information: facility name, address and contact; owner and operator; points of discharge; and a location map and site drawing.

- Project Description.

  The NOI requires a project description, which must describe changes in treatment components and operation that may have occurred since coverage under the General Permit was first granted.

- Compliance History.

  The NOI requires a summary of compliance with conditions, limitations, and other requirements of Order No. R1-2001-9. Such information will be evaluated to determine the suitability of continued coverage under the General Permit.

- Receiving Water Characterization.

  The NOI requires owners and operators to understand applicable water quality objectives and limitations for their specific receiving waters.

- Plans, Reports, Manuals.

Existing dischargers must submit a Toxicity Reduction Evaluation Workplan, an Operation and Maintenance Manual, and an Engineering Design Report, which must be prepared pursuant to Section xx of the General Permit. Existing dischargers who have previously submitted these documents to the Regional Board are required only to state that such documents have been previously submitted. .

d. Regional Water Board Authorization

In accordance with NPDES regulations at 40 CFR 122.28 (b) (2) dischargers seeking coverage under the General Permit must submit a Notice of Intent (NOI) to be covered by the General Permit. Dischargers who fail to submit an NOI in accordance with the terms of the General Permit cannot become authorized to discharge.

Authorization for existing dischargers – those authorized under Order No. R1-2001-9, is automatically continued under Order No. R1-2006-0048; however, existing dischargers must submit an NOI within 120 days following adoption of Order No. R1-2006-0048. The Regional Board views existing dischargers as those who have already demonstrated a suitability for coverage under the General Permit, and therefore, the requirements for continued coverage are less demanding than the requirements for new dischargers - those seeking coverage under the General Permit for the first time. Submittal of an NOI by existing dischargers and subsequent review by the Regional Water Board will allow a determination that continued coverage is appropriate and that there have been no material changes in the nature of the discharge.

Authorization for new dischargers requires submittal of an NOI, public notice of the proposed discharge by the discharger, and review and approval of the NOI by the Regional Water Board. Operations seeking coverage under the General Permit typically receive a great deal of public scrutiny because such operations are sites where some environmental damage has already occurred, i.e., groundwater has been contaminated with petroleum products and/or volatile organic compounds. Because of the interest and knowledge of such operations by neighbors and other parties, the Regional Water Board is retaining from Order No. R1-2001-9 the requirement for new dischargers to provide published, posted, and personal notice of a proposed discharge, and thereby, is allowing interested parties or individuals to seek additional information, offer comments, and raise concerns, which may be factors in the consideration of suitability for coverage under the General Permit.

Pursuant to NPDES regulations at 40 CFR 122.28 (b) (2) (vi), the Regional Water Board may authorize a discharger to discharge under the General Permit even if it has not submitted an NOI. This provision is not intended to relieve a discharger of its obligation to submit an NOI. Instead, it is means with which the Regional Board can require a discharger, who has not submitted an NOI, to operate in accordance with the terms of the General Permit.

B. Special Provisions

1. Stormwater

Although Order No. R1-2006-0048 does not include specific provisions to control discharges of stormwater, if applicable, authorized dischargers shall seek coverage under and adhere to the requirements of State Water Board Order No. 97-03-DWQ, NPDES General Permit No. CAS000001 – *Waste Discharge Requirements for Discharges of Stormwater Associated with Industrial Activities Excluding Construction Activities* (1997).

2. Special Studies, Technical Reports, and Monitoring Requirements

a. Whole Effluent Toxicity

In addition to a limitation and monitoring for whole effluent acute toxicity, the General Permit requires infrequent monitoring for whole effluent chronic toxicity to determine compliance with the Basin Plan's narrative water quality objective for toxicity. If either the acute toxicity effluent limitation or a chronic toxicity monitoring trigger of 1 TUc is exceeded, the Discharger must conduct accelerated toxicity monitoring. Results of accelerated toxicity monitoring will indicate a need to conduct a Toxicity Reduction Evaluation (TRE), if toxicity persists; or it will indicate that a return to routine toxicity monitoring is justified because persistent toxicity has not been identified by accelerated monitoring.

TREs shall be conducted in accordance with the TRE Workplan prepared by the Discharger pursuant to Section VI. C. 2. b of the Order. As a result of a TRE, this Order may be reopened to include a chronic toxicity limitation, a new acute toxicity limitation, and/or a limitation for a specific toxicant identified in the TRE.

b. Toxicity Reduction Evaluation Workplan

Existing and new dischargers must prepare, maintain, and update, as necessary, a TRE Workplan, which must be implemented when acute or chronic toxicity is persistent in effluent as determined by accelerated toxicity monitoring. Following initiation of a TRE, if the cause of toxicity cannot be identified and eliminated within a reasonable period of time, as determined by the Executive Officer, the Discharger shall discontinue the discharge to receiving waters and submit an evaluation to the Regional Water Board on alternate disposal methods or treatment system modifications that are proposed to correct the effluent toxicity. The Discharger shall correct the toxicity to the satisfaction of the Executive Officer prior to resuming a discharge to surface waters.

Numerous guidance documents are available, as identified below, for preparation of the TRE Workplan.

i. Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants, (EPA/833B-99/002), August 1999.

ii. Generalized Methodology for Conducting Industrial TREs, (EPA/600/2-88/070), April 1989.

iii. *Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures,* Second Edition, EPA 600/6-91/005F, February 1991.

iv. *Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I*, EPA 600/6-91/005F, May 1992.

v. *Methods for Aquatic Toxicity Identification Evaluations: Phase II Toxicity Identification Procedures for Samples Exhibiting acute and Chronic Toxicity,* Second Edition, EPA 600/R-92/080, September 1993.

vi. *Methods for Aquatic Toxicity Identification Evaluations: Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity,* Second Edition, EPA 600/R-92/081, September 1993.

vii. *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms,* Fifth Edition, EPA-821-R-02-012, October 2002.

viii. *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*, Fourth Edition, EPA-821-R-02-013, October 2002.

ix. *Technical Support Document for Water Quality-based Toxics Control, EPA/505/2-90-001, March 1991*

c. Operation and Maintenance Manual

The requirement for all dischargers to prepare, maintain, and update, as necessary, an O&M Manual is retained form Order No. R1-2001-9.

d. Engineering Design Report

The requirement for all dischargers to submit an Engineering Design Report with its NOI/Application is retained form Order No. R1-2001-9.

e. Granular Activated Carbon Quality Control/Quality Assurance

Authorized dischargers must implement a Quality Control/Quality Assurance (QA/QC) Program to assure that newly replenished granular activated carbon in the treatment system is providing high quality effluent with respect to pH, ammonia, and inorganic constituents. Activities conducted as part of the GAC QA/QC program shall be documented in routine Discharge Monitoring Reports submitted for the facility.

3. Notice of Start Up

At least 7 days prior to initiating a discharge, newly authorized dischargers must notify the Regional Water Board of the time and date for initiation of the discharge(s) authorized under the General Permit.

VIII. PUBLIC PARTICIPATION

The Regional Water Board is considering the issuance of WDRs that will serve as a general NPDES permit for facilities that discharge highly treated groundwater to surface waters following the extraction and cleanup of groundwater polluted with petroleum hydrocarbons and/or volatile organic compounds. As a step in the WDR adoption process, the Regional Water Board staff has developed tentative WDRs. The Regional Water Board encourages public participation in the WDR adoption process.

A. Notification of Interested Parties

The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Notification was provided through the following public information outlets:

Internet posting on the North Coast Regional Water Quality Control Board Website at the URL: http://www.waterboards.ca.gov/~rwqcb1/pubnot/pubhear/wdr.html on beginning on April 21, 2006.

Press Democrat, Santa Rosa, for Sonoma County, Marin County, and Mendocino County	April 19, 2006
Times Standard, Eureka, for Humboldt County	April 28, 2006
Daily Triplicate, Crescent City, for Del Norte County	April 19, 2006
Siskiyou Daily News, Yreka for Siskiyou County	April 19, 2006
Trinity Journal Weekly, Weaverville, for Trinity County	April 19, 2006
Fort Bragg Advocate News, Fort Bragg, for Mendocino County	April 27, 2006

B. Written Comments

The staff determinations are tentative. Interested persons are invited to submit written comments concerning these tentative WDRs. Comments should be submitted either in person or by mail to the Executive Office at the Regional Water Board at the address above on the cover page of this General Permit.

To be fully responded to by staff and considered by the Regional Water Board, written comments should be received at the Regional Water Board offices by 5:00 p.m. on May 21, 2006**.**

C. Public Hearing

The Regional Water Board will hold a public hearing on the tentative WDRs during its regular Board meeting on the following date and time and at the following location:

Date:	June 20 and 21, 2006
Time:	9:00 A.M.
Location:	North Coast Regional Water Quality Control Board 5550 Skylane Blvd., Suite A, Santa Rosa, CA 95403

Interested persons are invited to attend. At the public hearing, the Regional Water Board will hear testimony, if any, pertinent to the discharge, WDRs, and permit. Oral testimony will be heard; however, for accuracy of the record, important testimony should be in writing.

Please be aware that dates and venues may change. Our web address is http://www.waterboards.ca.gov/northcoast/ where you can access the current agenda for changes in dates and locations.

D. Waste Discharge Requirements Petitions

Any aggrieved person may petition the State Water Resources Control Board to review the decision of the Regional Water Board regarding the final WDRs. The petition must be submitted within 30 days of the Regional Water Board's action to the following address:

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100

E. Information and Copying

The General Permit, Fact Sheet, Monitoring and Reporting Plan, and related documents, comments received, and other information are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Regional Water Board by calling 707-576-2220.

F. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Regional Water Board, reference this facility, and provide a name, address, and phone number.

G. Additional Information

Requests for additional information or questions regarding this General Permit should be directed to Jim Tischler at 707-576-2469 or at JTischler@waterboards.ca.gov.

Filename: 06_0048_JAT_General_NPDES.doc
Directory: Q:\DOCUMENT REVIEWS\AGENDA\2006\06-2006\General NPDES Permit for Treated Groundwater\ADOPTED
Template: C:\Documents and Settings\staff\Application Data\Microsoft\Templates\Normal.dot
Title: CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
Subject: Municipal NPDES Permit Boilerplate
Author: Region 5 NPDES Program Manager
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Attachment A

NOTICE OF INTENT FOR NEW AND EXISTING DISCHARGERS

TO COMPLY WITH ORDER NO. R1-2006-0048
GENERAL NPDES PERMIT NO. CAG911001

FOR DISCHARGES OF HIGHLY TREATED GROUNDWATER TO SURFACE WATERS FOLLOWING EXTRACTION AND CLEANUP OF GROUNDWATER POLLUTED WITH PETROLEUM HYDROCARBONS AND VOLATILE ORGANIC COMPOUNDS

I. FACILITY INFORMATION

A. Facility

Name:			
Physical Address:			
City:	County:	State:	Zip Code:
Assessor's Parcel Nos.	Facility:	Discharge Point:	
Mailing Address:			
City:		State:	Zip Code:
Contact Person, Title:			
Telephone Number:	E-Mail Address:		

B. Facility Owner

Name:		
Mailing Address:		
City:	State:	Zip Code:
Telephone Number:	E-Mail Address:	

C. Facility Operator

Name:		
Mailing Address:		
City:	State:	Zip Code:
Telephone Number:	E-Mail Address:	

D. Receiving Water

Receiving Water:		
Discharge Point 001 Location	Latitude:	Longitude:
Discharge Point 002 Location	Latitude:	Longitude:
Discharge Point 003 Location	Latitude:	Longitude:

E. Location Map and Site Drawing

Attach a Location Map, which shows topography of the area extending at least one mile beyond the facility boundaries, including the proposed discharge point(s) and all surface waters, and a Site Drawing, which is descriptive of the site of the pump-and-treat operation and shows the path of the discharge from the treatment facility to the receiving water, including any storm sewers or ditches through which the discharge might travel.

II. PROJECT DESCRIPTION

Provide a full description of the proposed pump-and-treat project, including, at a minimum:

A. Background information – the origin of groundwater contamination, a description of the local hydrogeology, and the lateral and vertical extent of groundwater contamination;

B. The status of the groundwater investigation, including definition of free product and dissolved phase plumes;

C. Copies of directives from the Regional Water Board and other governmental agencies requiring cleanup of contaminated groundwater; and

D. Description of the groundwater collection and treatment system, including treatment technologies and anticipated rates of pumping, storage, treatment, and discharge.

E. Alternative disposal options for the discharge shall be adequately assessed to demonstrate that no feasible disposal alternatives are available.

F. Other information necessary to demonstrate eligibility as defined in section I.C of this permit.

Identify other environmental and land use permits which have been issued or which are required for operation of the pump-and-treat facility.

III. CHARACTERIZATION FOR PRIORITY POLLUTANTS

To be considered by the Regional Water Board for authorization to discharge under the terms of the General Permit, new Dischargers must have analyzed both the receiving water and contaminated/untreated groundwater at least one time in the 18 month period prior to submittal of this NOI for all groups of pollutants and pollutant parameters listed below, in accordance with U.S. EPA approved analytical methods at 40 CFR Part 136 – *Guidelines Establishing Test Procedures for the Analysis of Pollutants*.

For existing dischargers who have previously discharged treated groundwater under an individual permit or under Order No. R1-2001-9, analyses for CTR and Title 22 pollutants conducted on the receiving water and on effluent from an existing groundwater treatment system conducted within the past five years may be used to demonstrate eligibility for coverage under this Order.

CTR Pollutants	The toxic pollutants listed by the California Toxics Rule (CTR) at 40 CFR 131.38
Title 22 Pollutants	The pollutants with drinking water primary maximum contaminant levels (MCLs) established by the State Department of Health Services at Title 22 of the California Code of Regulations, Division 4, Chapter 15, Article 4 (Primary Standards – Inorganic Chemicals) and Article 5.5 (Primary Standards – Organic Chemicals)
Fuel Oxygenates	Methyl tertiary-butyl ether (MTBE) Di-isopropyl ether (DIPE) Tertiary-amyl methyl ether (TAME) Ethyl tertiary-butyl ether (ETBE) Tertiary-butyl alcohol (TBA) Methanol Ethanol
TPH	Total petroleum hydrocarbons

Using the data format shown in Table Nos. 1 – 3 at the back of this NOI form, provide a full characterization of both the receiving water and either contaminated/untreated groundwater (for new dischargers) or the treatment system effluent (for existing dischargers). . The characterization shall include:

A. The number of times that receiving water and contaminated/untreated groundwater or treatment system effluent have been sampled and analyzed for each pollutant within the past five years.

B. Analytical results for each pollutant, including:

   1. The method detection limit (MDL) reported by the analytical lab. If more than one MDL has been reported for a pollutant, state the range of MDLs that has been reported.

2. The Reporting Limit (RL) or the Reporting Detection Limit (RDL) reported by the analytical lab. If more than one RL or RDL has been reported for a pollutant, state the range of RLs or RDLs that has been reported.

3. The highest reported concentration of each pollutant. State "ND" if all analytical results have been reported as non-detectable (ND). Indicate when a measured concentration was estimated or detected but not quantified (DNQ) by the lab.

C. Several individual pollutants are listed as CTR pollutants, as Title 22 pollutants, and as Fuel Oxygenates. Redundant analyses for those pollutants are not required for compliance with the groundwater characterization directives contained in this section of the NOI. The lists are presented to assist the analytical labs in their identification of analytical requirements.

IV. RECEIVING WATER CHARACTERIZATION

Receiving Water:
Receiving Water Hardness (mg/L $CaCO_3$) Min: Max:
Are there water quality objectives established by Section 3 of the Basin Plan, as listed in Attachment B of this Order, specifically for the receiving water for total dissolved solids, specific conductance, dissolved oxygen, pH, hardness, and/or boron?
Is the receiving water listed as impaired pursuant to Section 303 (d) of the Clean Water Act? If yes, for what pollutants?
Is the receiving water part of an outstanding national, state, or local resource, such as a national or state park, wildlife refuge, or an area of exceptional recreational or ecological significance? If yes, please identify:
What is the applicable water quality objective for temperature for the receiving water, as identified by the Basin Plan?

V. PLANS, REPORTS, MANUALS

New dischargers seeking coverage under the General Permit for the first time shall submit to the Regional Board as attachments to this NOI form the following documents and materials required by Section VI. C. 2 of Order No. R1-2006-0048.

- Toxicity Reduction Evaluation Workplan
- Operation and Maintenance Manual
- Engineering Design Report.

VI. CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this Notice of Intent and all attachments, and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the Notice of Intent, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name and Title (type or print)	Signature	Date Signed

GROUNDWATER AND RECEIVING WATER CHARACTERIZATION

Table 1 - CTR Pollutants in Untreated/Contaminated Groundwater

Pollutant	CAS No.	No. of Analyses	Analytical Results (µg/L)			ML (µg/L)
			MDL	RL or RDL	Highest Measured Concentration	
Antimony	7440360					0.5
Arsenic	7440382					1.0
Beryllium	7440417					0.5
Cadmium	7440439					0.25
Chromium $^{+3}$	7440473					-
Chromium $^{+6}$	18540299					5.0
Copper	7440508					0.5
Lead	7439921					0.5
Mercury	7439976					0.2
Nickel	7440020					1.0
Selenium	7782492					1.0
Silver	7440224					0.25
Thallium	7440280					1.0
Zinc	7440666					1.0
Cyanide	57125					5.0
Asbestos	1332214					-
2,3,7,8 TCDD (Dioxin)	1746016					
Acrolein	107028					2.0
Acrylonitrile	107131					2.0
Benzene	71432					0.5
Bromoform	75252					0.5
Carbon Tetrachloride	56235					0.5
Chlorobenzene	108907					0.5
Chlorodibromomethane	124481					0.5
Chloroethane	75003					0.5

Table 1 - CTR Pollutants in Untreated/Contaminated Groundwater						
Pollutant	**CAS No.**	**No. of Analyses**	**Analytical Results (µg/L)**			**ML (µg/L)**
			MDL	**RL or RDL**	**Highest Measured Concentration**	
2-Chlorethylvinyl Ether	110758					1.0
Chloroform	67663					0.5
Dichlorobromomethane	75274					0.5
1,1 Dichloroethane	75343					0.5
1,2 Dichloroethane	107062					0.5
1,1 Dichloroethene	75354					0.5
1,2 Dichloropropane	78875					0.5
1,3 Dichloropropylene	542756					0.5
Ethylbenzene	100414					0.5
Methyl Bromide	74839					1.0
Methyl Chloride	74873					0.5
Methylene Chloride	75092					0.5
1,1,2,2 Tetrachloroethane	79345					0.5
Tetrachloroethylene	127184					0.5
Toluene	108883					0.5
Trans-1,2 Dichloroethylene	156605					0.5
1,1,1 Trichloroethane	71556					0.5
1,1,2 Trichloroethane	79005					0.5
Trichloroethylene	79016					0.5
Vinyl Chloride	75014					0.5
2 Chlorophenol	95578					2.0
2,4 Dichlorophenol	120832					1.0
2,4 Dimethylphenol	105679					1.0
4,6 Dinitro-2-methylphenol	534521					5.0
2,4 Dinitrophenol	51285					5.0
2 Nitrophenol	88755					10
4-Nitrophenol	100027					5.0

Table 1 - CTR Pollutants in Untreated/Contaminated Groundwater						
Pollutant	**CAS No.**	**No. of Analyses**	**Analytical Results (µg/L)**			**ML (µg/L)**
			MDL	**RL or RDL**	**Highest Measured Concentration**	
4-Chloro-3-Methylphenol	59507					1.0
Pentachlorophenol	87865					1.0
Phenol	108952					1.0
2,4,6 Trichlorophenol	88062					10
Acenapthene	83329					0.5
Acenapthylene	208968					0.2
Anthracene	120127					2.0
Benzidine	92875					5.0
Benzo(a)Anthracene	56553					5.0
Benzo(a)Pyrene	50328					2.0
Benzo(b)Fluoranthene	205992					10
Benzo(g,h,i)Perylene	191242					0.1
Benzo(k)Fluoranthene	207089					2.0
Bis(2-Chloroethoxy)Methane	111911					5.0
Bis(2-Chloroethyl)Ether	111444					1.0
Bis(2-Chloroisopropyl)Ether	39638329					2.0
Bis(2-Ethylhexyl)Phthalate	117817					5.0
4-Bromophenyl Phenyl Ether	101553					5.0
Butyl Benzyl Phthalate	85687					10
2-Chloronapthalene	91587					10
4-Chlorophenyl Phenyl Ether	7005723					5.0
Chrysene	218019					5.0
Dibenzo(a,h)Anthracene	53703					0.1
1,2 Dichlorbenzene	95501					2.0
1,3 Dichlorobenzene	541731					1.0
1,4 Dichlorobenzene	106467					1.0
3,3 Dichlorobenzidine	91941					5.0

Table 1 - CTR Pollutants in Untreated/Contaminated Groundwater						
Pollutant	**CAS No.**	**No. of Analyses**	**Analytical Results (µg/L)**			**ML (µg/L)**
			MDL	**RL or RDL**	**Highest Measured Concentration**	
Diethyl Phthalate	84662					2.0
Dimethyl Phthalate	131113					2.0
Di-n-Butyl Phthalate	84742					10
2,4 Dinitrotoluene	121142					5.0
2,6 Dinitrotoluene	606202					5.0
Di-n-Octyl Phthalate	117840					10
1,2 Diphenylhydrazine	122667					1.0
Fluoranthene	206440					0.05
Fluorene	86737					0.1
Hexachlorobenzene	118741					1.0
Hexachlorobutadiene	87683					1.0
Hexachlorocyclopentadiene	77474					5.0
Hexachloroethane	67721					1.0
Indeno (1,2,3-cd) Pyrene	193395					0.05
Isophorone	78591					1.0
Napthalene	91203					0.2
Nitrobenzene	98953					1.0
N-Nitrosodimethylamine	62759					5.0
N-Nitrosodi-n-propylamine	621647					5.0
N-Nitrosodiphenylamine	86306					1.0
Phenanthrene	85018					0.05
Pyrene	129000					0.05
1,2,4 Trichlorobenzene	120821					1.0
Aldrin	309002					0.005
alpha-BHC	319846					0.01
beta-BHC	319857					0.005
Lindane (gamma-BHC)	58899					0.02

Table 1 - CTR Pollutants in Untreated/Contaminated Groundwater						
Pollutant	**CAS No.**	**No. of Analyses**	**Analytical Results (µg/L)**			**ML (µg/L)**
			MDL	**RL or RDL**	**Highest Measured Concentration**	
delta-BHC	319868					0.005
Chlordane	57749					0.1
4,4-DDD	72548					0.05
4,4-DDE	72559					0.05
4,4-DDT	50293					0.01
Dieldrin	60571					0.01
alpha-Endosulfan	959988					0.02
beta-Endosulfan	33213659					0.01
Endosulfan Sulfate	1031078					0.05
Endrin	72208					0.01
Endrin Aldehyde	7421934					0.01
Heptachlor	76448					0.01
Heptachlor Epoxide	1024573					0.01
PCBs	1336363					0.5
Toxaphene	8001352					0.5

Table 2 - Title 22 Pollutants						
Pollutant	**CAS No.**	**No. of Analyses**	**Analytical Results (µg/L)**			**DLR (µg/L)**
			MDL	**RL or RDL**	**Highest Measured Concentration**	
Aluminum	7429905					50
Antimony	7440360					6.0
Arsenic	7440382					2.0
Asbestos	1332214					0.2 MFL > 10 µm
Barium	7440393					100
Beryllium	7440417					1.0
Cadmium	7440439					1.0
Chromium						10
Cyanide	57125					100
Fluoride	7782414					100
Mercury	7439976					1.0
Nickel	7440020					10
Nitrate (as N)	-					2,000
Nitrate + Nitrite (sum as N)	-					-
Nitrite (as N)	-					400
Selenium	7782492					5.0
Thallium	7440280					1.0
Benzene	71432					0.5
Carbon Tetrachloride	56235					0.5
1,2 Dichlorbenzene	95501					0.5
1,4 Dichlorobenzene	106467					0.5
1,1 Dichloroethane	75343					0.5
1,2 Dichloroethane	107062					0.5
1,1 Dichloroethene	75354					0.5

Table 2 - Title 22 Pollutants						
Pollutant	**CAS No.**	**No. of Analyses**	**Analytical Results (µg/L)**			**DLR (µg/L)**
			MDL	**RL or RDL**	**Highest Measured Concentration**	
Cis-1,2 Dichloroethylene	156592					0.5
Trans-1,2 Dichloroethylene	156605					0.5
Methylene Chloride	75092					0.5
1,2 Dichloropropane	78875					0.5
1,3 Dichloropropylene	542756					0.5
Ethylbenzene	100414					0.5
Methyl-tert-butyl-ether	1634044					3.0
Monochlorobenzene	108907					0.5
Styrene	100425					0.5
1,1,2,2 Tetrachloroethane	79345					0.5
Tetrachloroethylene	127184					0.5
Toluene	108883					0.5
1,2,4 Trichlorobenzene	120821					0.5
1,1,1 Trichloroethane	71556					0.5
1,1,2 Trichloroethane	79005					0.5
Trichloroethylene	79016					0.5
Trichlorofluoromethane	75694					5.0
1,1,2 Trichloro-1,2,2 Trifluoroethane	76131					10
Vinyl Chloride	75014					0.5
Xylenes	1330207					0.5
Alachlor	15972608					1.0
Atrazine	1912249					0.5
Bentazon	25057890					2.0
Benzo(a)pyrene	50328					0.1
Carbofuran	1563662					5.0

Table 2 - Title 22 Pollutants						
Pollutant	**CAS No.**	**No. of Analyses**	**Analytical Results (µg/L)**			**DLR (µg/L)**
			MDL	**RL or RDL**	**Highest Measured Concentration**	
Chlordane	57749					0.1
2,4 D	94757					10
Dalapon	75990					10
Dibromochloropropane	96128					0.01
Di(2-ethylhexyl)adipate	103231					5.0
Di(2-ethylhexyl)phthalate	117817					3.0
Dinoseb	88857					2.0
Diquat	85007					4.0
Endothall	145733					45
Endrin	72208					0.1
Ethylene Dibromide	8003074					0.02
Glyphosate	1071836					25
Heptachlor	76448					0.01
Heptachlor Epoxide	1024573					0.01
Hexachlorobenzene	118741					0.5
Hexachlorocyclopentadiene	77474					1.0
Lindane	58899					0.2
Methoxychlor	72435					10
Molinate	2212671					2.0
Oxamyl	23135220					20
Pentachlorophenol	87865					0.2
Picloram	1918021					1.0
PCBs	1336363					0.5
Simazine	122349					1.0
Thiobencarb	28249776					1.0

Table 2 - Title 22 Pollutants						
Pollutant	**CAS No.**	**No. of Analyses**	**Analytical Results (µg/L)**			**DLR (µg/L)**
			MDL	**RL or RDL**	**Highest Measured Concentration**	
Toxaphene	8001352					1.0
2,3,7,8 TCDD (Dioxin)	1746016					5×10^{-6}
2,4,5 TP (Silvex)	93721					1.0

Table 3 - Fuel Oxygenates and Other Pollutants In Untreated/Contaminated Groundwater						
Pollutant	**CAS No.**	**No. of Analyses**	**Analytical Results (µg/L)**			**ML (µg/L)**
			MDL	**RL or RDL**	**Highest Measured Concentration**	
Methyl Tertiary Butyl Ether (MTBE)	1634044					0.5
Di-Isopropyl Ether (DIPE)	10823					0.5
Tertiary Amyl Methyl Ether (TAME)	994058					0.5
Ethyl Tertiary Butyl Ether (ETBE)	637923					0.5
Tertiary Butyl Alcohol (TBA)	75650					5.0
Methanol	67561					1,000
Ethanol	64175					5.0
Total Petroleum Hydrocarbons						
					Range of Measured Concentrations	
Specific Conductance (µmhos/cm)						-
Total Dissolved Solids (mg/L)						-
pH (pH units)						-
Hardness (mg/L $CaCO_3$)						-
Boron (mg/L)						-

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Attachment E – Monitoring and Reporting Program – Table of Contents

ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

NPDES regulations at 40 CFR 122.48 require that all NPDES permits specify monitoring and reporting requirements. CWC Sections 13267 and 13383 also authorize the Regional Board to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements, which implement the federal and State regulations.

I. GENERAL MONITORING PROVISIONS

Composite samples may be taken by a proportional sampling device approved by the Executive Officer or by grab samples composited in proportion to flow.

Facilities authorized to discharge under the General Permit shall meet the basic monitoring requirements of this Monitoring and Reporting Program. The Regional Water Board may require additional monitoring, as needed and on a case-by-case basis, to determine compliance with the requirements of the General Permit, to more fully characterize discharges from authorized sites, and otherwise to assure protection of receiving water quality and beneficial uses.

II. MONITORING LOCATIONS

The Discharger shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements of the General Permit.

Sample Stream or Discharge Point	Monitoring Location Name	Monitoring Location Description
Treatment System Influent	M-INF	Untreated groundwater at a point in the groundwater collection system immediately prior to treatment.
Discharge Point 001	M-001	Treated effluent, after treatment and before contact with the receiving water and/or dilution by any other water or waste.
Discharge Point 002	M-002	If more than one discharge point is authorized under the General Permit, compliance monitoring locations shall be named M-002, M-003, etc. and shall be located so as to allow collection of treated effluent after treatment and before contact with receiving water and/or dilution by any other water or waste.
Receiving Water	R-001	Receiving water immediately upstream of the point of discharge so that samples are representative of upstream, background conditions within the receiving stream.
Receiving Water	R-002	Receiving water at an appropriate monitoring location, downstream of the point of discharge, that adequately represents downstream water quality.

III. INFLUENT MONITORING REQUIREMENTS

The Discharger shall monitor untreated groundwater/influent to the treatment facility at monitoring location M-INF in accordance with the following schedule.

Parameter	Units	Sample Type	Monitoring Frequency
Flow	gpd [A]	Continuous	Daily

[A] gpd = gallons per day

IV. EFFLUENT MONITORING REQUIREMENTS

The Discharger shall monitor treated effluent at Monitoring Locations M-001, M-002, etc in accordance with the following schedule.

Parameter	Units	Sample Type	Sampling Frequency	Analytical Method
Flow	gpd	Continuous meter	daily	Approved test methods described in The Federal Code of Regulations at 40 CFR 136
Temperature	° C	Field monitor	1x / month	
pH	stnd units	Field monitor	1x / month	
Total Dissolved Solids [A]	mg/L	Grab or Composite	2x / year	
Specific Conductance [A]	µmhos/cm	Field monitor	2x / year	
Dissolved Oxygen	mg/L	Field monitor	2x / year	
Hardness	mg/L	Grab or Composite	2x / year	
Boron [A]	mg/L	Grab or Composite	2x / year	
TPH, BTEX Compounds, and Fuels Oxygenates [B]	µg/L	Grab	1x / month [H]	
VOCs [C]	µg/L	Grab	1x / month [H]	
Acute Toxicity [D]	pass/fail	Grab or Composite	1x / year [H]	
Chronic Toxicity [E]	TUc	Grab or Composite	1x / year	
CTR Pollutants [F, I]	µg/L	Grab	2x / year [H]	
Title 22 Pollutants [G, I]	µg/L	Grab	2x / year [H]	

[A] Specific conductance, total dissolved solids, and boron shall be monitored in effluent only if the receiving water is specifically identified in Table 3-1 of the Basin Plan and listed in Attachment B of this Order; and as established by Section IV. C. 4 of the General Permit, the water quality objectives for the specifically identified receiving waters are applicable as end-of-pipe effluent limitations.

[B] TPH = total petroleum hydrocarbons. BTEX compounds = benzene, ethylbenzene, toluene, and xylene. Fuel oxygenates = methyl tertiary-butyl ether, di-isopropyl ether, tertiary-amyl methyl ether, ethyl tertiary-butyl alcohol, methanol, and ethanol. These pollutants shall be monitored monthly only at sites where petroleum products have impacted groundwater. Monitoring for these pollutants shall not be discontinued at any site authorized by the General Permit until the Executive Officer has provided written concurrence that petroleum products have not impacted groundwater.

[C] VOCs = volatile organic compounds = those pollutants identified as Compound Nos. 17 – 44 by the California Toxics Rule at 40 CFR 131.38 (b) and those pollutants identified as Volatile Organic Chemicals (VOCs) for which the Department of Health Services has established Maximum Contaminant Levels at Title 22 California Code of Regulations § 64444. These pollutants shall be monitored monthly at sites where volatile organic compounds have impacted groundwater. Monitoring for these pollutants shall not be discontinued at any site authorized by the General Permit until the Executive Officer has provided written concurrence that volatile organic compounds, excluding those associated with petroleum products, have not impacted groundwater.

[D] Whole effluent acute toxicity testing shall be conducted in accordance with Section V of this MRP.

[E] Whole effluent chronic toxicity testing shall be conducted in accordance with Section V of this MRP.

[F] CTR Pollutants are those identified as Compound Nos. 1 – 126 by the California Toxics Rule (CTR) at 40 CFR 131.38.

[G] Title 22 Pollutants are those pollutants with drinking water primary maximum contaminant levels (MCLs) established by the State Department of Health Services at Title 22 of the California Code of Regulations, Division 4, Chapter 15, Article 4 (Primary Standards – Inorganic Chemicals) and Article 5.5 (Primary Standards – Organic Chemicals).

[H] Monitoring for this parameter shall occur during the first thirty days of operation and during the first and third calendar quarters thereafter.

[I] Compliance monitoring data for the CTR and Title 22 pollutants shall be submitted with the Notice of Intent (NOI) for authorization to discharge under Order No. R1-2006-0048 and during the first and third calendar quarters thereafter.

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. Acute Toxicity

Dischargers shall conduct acute toxicity monitoring, in accordance with the following requirements, to determine compliance with the acute toxicity effluent limitation established by this Order.

1. Test Frequency. Dischargers shall conduct whole effluent acute toxicity testing one time per year.

2. Sample Type. For static renewal testing, grab samples representative of effluent quality shall be collected at Monitoring Location M-001.

3. Test Species. Test species for acute toxicity monitoring shall be an invertebrate, (the water flea - *Ceriodaphnia dubia*) and a vertebrate (the rainbow trout - *Orncorhychus mykiss* or the fathead minnow – *Pimephales promelas*), for the first two suites of tests conducted in accordance with the provisions of the General Permit. After this screening period, acute toxicity testing shall be conducted using the most sensitive species.

4. Test Methods. The presence of acute toxicity shall be determined as specified in *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* (U.S. EPA Office of Water, EPA/821-R-02-012, 5th edition or subsequent editions), or other methods approved by the Executive Officer.

5. Test Failure. If an acute toxicity test does not meet all test acceptability criteria, as specified in the test method, the Discharger shall re-sample and re-test as soon as possible, but not later than 7 days following notification of test failure.

6. Accelerated Monitoring. If acute toxicity test results indicate acute toxicity in effluent exceeding the effluent limitation established by the General Permit, (90 percent survival), and the test procedures meet all acceptability criteria, the Discharger shall take two more samples - one within 14 days and one within 21 days of receiving the initial sample result. If any of these accelerated monitoring samples exceed the effluent limitation, within thirty days of notification by the laboratory of test results exceeding the effluent limitation during accelerated monitoring, the Permittee shall submit a TRE Action Plan to the Regional Water Board, including, at minimum:

    a. Specific actions the Permittee will take to investigate and identify the cause(s) of toxicity, including a TRE WET monitoring schedule;

    b. Specific actions the Permittee will take to mitigate the impact of the discharge and prevent the recurrence of toxicity; and

    c. A schedule for these actions.

If the two accelerated monitoring samples are in compliance with the acute toxicity limitation, and testing procedures meet acceptability criteria, then a TRE is not be required. If the discharge has been discontinued before the accelerated monitoring samples can be collected, the Discharger shall contact the Executive Officer within 21 days with a plan to demonstrate compliance with the acute toxicity effluent limitation.

7. Notification. The Discharger shall notify the Regional Water Board in writing within 14 days of the receipt of test results that exceed the acute toxicity effluent limitation. The notification will describe actions the Discharger has taken or will take to investigate and correct the cause(s) of toxicity. It shall also include a status report on any actions required by this Order, with a schedule for actions not yet completed. If no actions have been taken, the reasons shall be given.

8. Following initiation of a TRE, if the cause of toxicity cannot be identified and eliminated within a reasonable period of time, as determined by the Executive Officer, the Permittee shall discontinue the discharge. The Permittee shall correct the toxicity in effluent to the satisfaction of the Executive officer prior to resuming a discharge to surface waters.

9. The Executive Officer may require a discharger to initiate a TRE, notwithstanding the results of accelerated monitoring.

B. Chronic Toxicity

The Discharger shall conduct chronic toxicity testing to determine compliance with the Basin Plan's narrative water quality objective for toxicity and shall adhere to the following chronic toxicity testing requirements.

1. Test Frequency. The Discharger shall conduct routine chronic toxicity testing at least one time every year.

2. Sample Type. For static renewal testing, grab samples representative of effluent quality shall be collected at Monitoring Location 001.

1. Test Species. The following three test species shall be used for chronic toxicity monitoring conducted pursuant to the General Permit.

Short-Term Methods for Estimating Chronic Toxicity – Fresh Waters

Species	Scientific Name	Effect	Test Duration
fathead minnow	*Pimephales promelas*	larval survival; growth	7 days
water flea	*Ceriodaphnia dubia*	survival; number of young	6 to 8 days
alga	*Selenastrum capricornutum*	growth rate	4 days

4. Test Methods. The presence of chronic toxicity shall be determined as specified in EPA's *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and*

Receiving Water to Freshwater Organisms (U.S. EPA Report No. EPA-821-R-02-013, 4th or subsequent editions).

5. Test Dilutions. Chronic toxicity testing shall be conducted using a control and a series of five effluent dilutions (100, 85, 70, 50, and 25 percent). Control and dilution water should be receiving water or laboratory water, as appropriate, as described in the EPA guidance manual. If the dilution water used is different from the culture water, a second control using culture water shall be used.

6. Reference Toxicant. If organisms are not cultured in-house, concurrent testing with a reference toxicant shall be conducted. Where organisms are cultured in-house, monthly reference toxicant testing is sufficient. Reference toxicant tests also shall be conducted using the same test conditions as the effluent toxicity tests (e.g., same test duration, etc).

7. Test Failure. If either the reference toxicant test or the chronic toxicity test does not meet all test acceptability criteria, as specified in the test method, the Discharger shall re-sample and re-test as soon as possible, but not later than 7 days following notification of test failure.

8. Accelerated Monitoring Numeric Trigger. The chronic toxicity monitoring trigger is 1.0 chronic toxicity units (TUc, where TUc = 100 / NOEC). The monitoring trigger is not an effluent limitation; it is the toxicity threshold at which the Discharger is required to begin accelerated monitoring.

9. Notification. The Discharger shall notify the Regional Water Board in writing within 14 days of the receipt of test results exceeding the chronic toxicity monitoring trigger.

10. Accelerated Monitoring Requirements. If the result of any chronic toxicity test exceeds the monitoring trigger, and the testing meets all test acceptability criteria, the Permittee shall initiate accelerated monitoring. Accelerated monitoring shall consist of four additional effluent samples, one test conducted approximately every week, over a four–week period. Testing shall commence within 14 days of receipt of the sample results indicating an exceedance of the toxicity monitoring trigger. If the discharge is discontinued before the additional samples can be collected, the Permittee shall contact the Executive Officer within 21 days with a plan to reduce chronic toxicity in effluent. The following protocol shall be used for accelerated monitoring and TRE implementation.

    a. If the results of four consecutive accelerated monitoring tests do not exceed the monitoring trigger, the Permittee may discontinue accelerated monitoring and resume regular chronic toxicity monitoring. If there is evidence of persistent effluent toxicity, as defined below, a TRE shall be initiated.

    b. If the source(s) of the toxicity is easily identified, the Discharger shall make necessary corrections to the facility and shall continue accelerated monitoring until four (4) consecutive accelerated tests do not exceed the monitoring trigger. Upon confirmation that effluent toxicity has been eliminated, the Permittee may discontinue accelerated monitoring and resume regular chronic toxicity monitoring.

c. If the result of any accelerated toxicity test exceeds the monitoring trigger, the Permittee shall discontinue accelerated monitoring and initiate a TRE to investigate the cause(s) of, and identify corrective actions to reduce or eliminate effluent toxicity. Within thirty (30) days of notification by the laboratory of the test results exceeding the monitoring trigger during accelerated monitoring, the Permittee shall submit a TRE Action Plan to the Regional Water Board including, at minimum:

   i. Specific actions the Permittee will take to investigate and identify the cause(s) of toxicity, including a TRE WET monitoring schedule;

   ii. Specific actions the Permittee will take to mitigate the impact of the discharge and prevent the recurrence of toxicity; and

   iii. A schedule for these actions.

d. Following initiation of a TRE, if the cause of toxicity cannot be identified and eliminated within a reasonable period of time, as determined by the Executive Officer, the Permittee shall discontinue the discharge. The Permittee shall correct the toxicity in effluent to the satisfaction of the Executive officer prior to resuming a discharge to surface waters.

e. The Executive Officer may require a Discharger to initiate a TRE, notwithstanding the results of accelerated monitoring.

C. Additional Testing

The Executive Officer may request additional toxicity testing following any significant change in the nature of the effluent discharged due to changes in groundwater character, treatment system operation, or treatment system components.

D. Toxicity Reporting Requirements

1. Chronic toxicity monitoring results shall be reported in chronic toxicity units (TUc), where TUc = [100 / NOEC] or [100 / ICp] or [100 / ECp], where IC and EC are expressed in percent effluent. Acute toxicity monitoring results shall be reported as the percent survival in undiluted effluent.

2. Routine Reporting: Toxicity monitoring results shall be reported in accordance with the appropriate EPA guidance manuals and this MRP and shall be attached to the self monitoring reports. Reporting of acute and chronic toxicity test results shall, at a minimum, include the following information for each test. (See Attachment C for definitions.)

   a. Sample date(s),

   b. Test initiation date,

   c. Test specie(s),

d. End point values for each dilution (e.g. number of young, growth rate, percent survival),

e. NOEC value(s), in percent effluent,

f. IC_{15}, IC_{25}, IC_{40}, and IC_{50} values (or EC_{15}, EC_{25}…etc.) in percent effluent

g. TUc values (100 / NOEC, 100 / IC_{25}, and 100 / EC_{25}),

h. Mean percent mortality (± standard deviation) after 96 hours in 100% effluent, if applicable,

i. NOEC and LOEC values for reference toxicant test(s),

j. IC_{50} or EC_{50} value(s) for reference toxicant test(s), and

k. Available water quality measurements for each test (e.g. pH, dissolved oxygen, temperature, conductivity, hardness (as $CaCO_3$), salinity, ammonia).

3. Compliance Summary: Results of acute and chronic toxicity monitoring shall be provided in the next quarterly self monitoring report and shall be tabulated to include the results all toxicity monitoring (screening, routine, and accelerated) that has been performed during the previous three years. The Compliance Summary shall clearly highlight that the Permittee is or is not in compliance with effluent limitations and other requirements of the General Permit regarding whole effluent toxicity.

VI. LAND DISCHARGE MONITORING REQUIREMENTS

The General Permit does not authorize discharges to land.

VII. RECLAMATION MONITORING REQUIREMENTS

The General Permit does not authorize reclamation or reuse of wastewater.

VIII. RECEIVING WATER MONITORING REQUIREMENTS

The Discharger shall monitor the receiving water at Monitoring Locations R-001 and at R-002 if applicable, according to the following schedule.

Parameter	Units	Sample Type	Sampling Frequency	Analytical Method
Temperature	° C	field monitor	1x / month	40 CFR 136
pH	stnd units	field monitor	1x / month	
Dissolved Oxygen	mg/L	field monitor	1x / month	
Turbidity	NTU	grab	1x / month	
Hardness	mg/L	grab	2x / year	
CTR Pollutants [A, D]	µg/L	Grab	2x / year [C]	
Title 22 Pollutants [B, D]	µg/L	Grab	2x / 1year [C]	

[A] CTR Pollutants are those identified as Compound Nos. 1 – 126 by the California Toxics Rule (CTR) at 40 CFR 131.38.

[B] Title 22 Pollutants are those pollutants with drinking water primary maximum contaminant levels (MCLs) established by the State Department of Health Services at Title 22 of the California Code of Regulations, Division 4, Chapter 15, Article 4 (Primary Standards – Inorganic Chemicals) and Article 5.5 (Primary Standards – Organic Chemicals).

[C] Monitoring for this parameter shall occur during the first thirty days of operation and during the first and third calendar quarters thereafter.

[D] Compliance monitoring data for the CTR and Title 22 pollutants shall be conducted during the first thirty days of operation and during the first and third calendar quarters therafter.

IX. OTHER MONITORING REQUIREMENTS

The CTR and Title 22 pollutants and the fuel oxygenates shall be monitored in accordance with the following provisions.

A. Laboratories performing analyses for the CTR and Title 22 pollutants and the fuel oxygenates shall be certified by the California Department of Health Services in accordance with the Section 13176 of the California Water Code.

B. With each sample result, dischargers shall report:

1. The Reporting Level (RL), as described below, and

2. The laboratory's current Method Detection Limit (MDL), as determined by the procedure established at 40 CFR Part 136, EPA's *Guidelines Establishing Test Procedures for the Analysis of Pollutants*.

C. The Minimum Levels (MLs) for the CTR pollutants and the fuel oxygenates and the Detection Limits for Purposes of Reporting (DLRs) for the Title 22 pollutants listed in Tables 1, 2, and 3 below represent the lowest quantifiable concentrations in a sample based on the proper application of all method-based analytical procedures and the absence of any matrix interferences. Assuming that all method-specific analytical steps are followed, the

ML and DLR values will also represent, after the appropriate application of method-specific factors (as described in 2.4 of the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California*), the lowest standards in the calibration curves during pollutant analyses. Common analytical practices sometimes require differential treatment of samples relative to calibration standards. Examples include:

Substance or Grouping	Method-Specific Treatment	Most Common Method-Specific Factor
Volatile Organics	No differential treatment	1
Semi-Volatile Organics	Samples concentrated by extraction	1000
Metals	Samples diluted or concentrated	0.5, 2, and 4
Pesticides	Samples concentrated by extraction	100

Other factors may be applied to the MLs and DLRs depending on the specific sample preparation steps employed. For example, the treatment typically applied in cases where there are matrix effects is to dilute the sample by a factor of ten. In such cases, this additional factor must be applied to the ML or DLR. Application of such factors will alter the MLs or DLRs and result in computation of the Reporting Level (RL).

Dischargers shall instruct the analytical laboratories to establish calibration standards so that the Minimum Level (ML) for the CTR pollutants and the fuel oxygenates or the Detection Limit for Purposes of Reporting (DLR) for the Title 22 pollutants, or their equivalent if there is differential treatment of samples relative to calibration standards, is, at least, the lowest calibration standard; **however, dischargers and their analytical labs shall use the lowest quantification limit that is reasonable**. Dischargers and their analytical laboratories may establish MLs or DLRs that are lower than the values listed below in Tables 1, 2, and 3. At no time shall analytical data be derived from extrapolation beyond the lowest point on a calibration curve.

Laboratories must provide a reason if analytical methods cannot achieve the MLs listed in Tables 1, Table 2, and Table 3 below for the reported analyses.

D. Reporting Protocols

Dischargers shall report analytical results using the following reporting protocols.

1. For sample results greater than or equal to the RL, the measured concentration shall be reported.

2. For sample results less than the RL but greater than or equal to the method detection limit (MDL), results shall be reported as DNQ (detected but not quantified). The estimated pollutant concentration shall also be reported.

2. Sample results less than the MDL shall be reported as ND (not detected).

3. When an RL is greater than the applicable ML or DLR for a given pollutant as listed in Table 1, Table 2, or Table 3 below, the Discharger shall explain why the RL is higher than the ML or DLR.

E. Compliance Determination

1. Dischargers shall be deemed out of compliance with an effluent limitation, if the concentration of the pollutant is greater than the effluent limitation and greater than or equal to the RL.

Table 1 - MLs for CTR Pollutants

CTR Pollutant	CAS No.	ML
Antimony	7440360	0.5
Arsenic	7440382	1.0
Beryllium	7440417	0.5
Cadmium	7440439	0.25
Chromium $^{+3}$	7440473	-
Chromium $^{+6}$	18540299	5.0
Copper	7440508	0.5
Lead	7439921	0.5
Mercury	7439976	0.2
Nickel	7440020	1.0
Selenium	7782492	1.0
Silver	7440224	0.25
Thallium	7440280	1.0
Zinc	7440666	1.0
Cyanide	57125	5.0
Asbestos	1332214	-
2,3,7,8 TCDD	1746016	
Acrolein	107028	2.0
Acrylonitrile	107131	2.0
Benzene	71432	0.5
Bromoform	75252	0.5
Carbon Tetrachloride	56235	0.5
Chlorobenzene	108907	0.5
Chlorodibromomethane	124481	0.5
Chloroethane	75003	0.5
2-Chlorethylvinyl Ether	110758	1.0
Chloroform	67663	0.5
Dichlorobromomethane	75274	0.5
1,1 Dichloroethane	75343	0.5
1,2 Dichloroethane	107062	0.5
1,1 Dichloroethene	75354	0.5

CTR Pollutant	CAS No.	ML
1,2 Dichloropropane	78875	0.5
1,3 Dichloropropylene	542756	0.5
Ethylbenzene	100414	0.5
Methyl Bromide	74839	1.0
Methyl Chloride	74873	0.5
Methylene Chloride	75092	0.5
1,1,2,2 Tetrachloroethane	79345	0.5
Tetrachloroethylene	127184	0.5
Toluene	108883	0.5
Trans-1,2 Dichloroethylene	156605	0.5
1,1,1 Trichloroethane	71556	0.5
1,1,2 Trichloroethane	79005	0.5
Trichloroethylene	79016	0.5
Vinyl Chloride	75014	0.5
2 Chlorophenol	95578	2.0
2,4 Dichlorophenol	120832	1.0
2,4 Dimethylphenol	105679	1.0
4,6 Dinitro-2-methylphenol	534521	5.0
2,4 Dinitrophenol	51285	5.0
2 Nitrophenol	88755	10
4-Nitrophenol	100027	5.0
4-Chloro-3-Methylphenol	59507	1.0
Pentachlorophenol	87865	1.0
Phenol	108952	1.0
2,4,6 Trichlorophenol	88062	10
Acenapthene	83329	0.5
Acenapthylene	208968	0.2
Anthracene	120127	2.0
Benzidine	92875	5.0
Benzo(a)Anthracene	56553	5.0
Benzo(a)Pyrene	50328	2.0

CTR Pollutant	CAS No.	ML
Benzo(b)Fluoranthene	205992	10
Benzo(g,h,i)Perylene	191242	0.1
Benzo(k)Fluoranthene	207089	2.0
Bis(2-Chloroethoxy)Methane	111911	5.0
Bis(2-Chloroethyl)Ether	111444	1.0
Bis (2-Chloroisopropyl) Ether	39638329	2.0
Bis (2-ethylhexyl) Phthalate	117817	5.0
4-Bromophenyl Phenyl Ether	101553	5.0
Butyl Benzyl Phthalate	85687	10
4-Chlorophenyl Phenyl Ether	7005723	10
Chrysene	218019	5.0
Dibenzo(a,h)Anthracene	53703	5.0
1,2 Dichlorbenzene	95501	0.1
1,3 Dichlorobenzene	541731	2.0
1,4 Dichlorobenzene	106467	1.0
3,3 Dichlorobenzidine	91941	1.0
Diethyl Phthalate	84662	5.0
Dimethyl Phthalate	131113	2.0
Di-n-Butyl Phthalate	84742	2.0
2,4 Dinitrotoluene	121142	10
2,6 Dinitrotoluene	606202	5.0
Di-n-Octyl Phthalate	117840	5.0
1,2 Diphenylhydrazine	122667	10
Fluoranthene	206440	1.0
Fluorene	86737	0.05
Hexachlorobenzene	118741	0.1
Hexachlorobutadiene	87683	1.0
Hexachlorocyclopentadiene	77474	1.0
Hexachloroethane	67721	5.0
Indeno (1,2,3-cd) Pyrene	193395	1.0
Isophorone	78591	0.05
Napthalene	91203	1.0

CTR Pollutant	CAS No.	ML
Nitrobenzene	98953	0.2
N-Nitrosodimethylamine	62759	1.0
N-Nitrosodi-n-propylamine	621647	5.0
N-Nitrosodiphenylamine	86306	5.0
Phenanthrene	85018	1.0
Pyrene	129000	0.05
1,2,4 Trichlorobenzene	120821	0.05
Aldrin	309002	1.0
alpha-BHC	319846	0.005
beta-BHC	319857	0.01
Lindane (gamma-BHC)	58899	0.005
delta-BHC	319868	0.02
Chlordane	57749	0.005
4,4-DDD	72548	0.1
4,4-DDE	72559	0.05
4,4-DDT	50293	0.05
Dieldrin	60571	0.01
alpha-Endosulfan	959988	0.01
beta-Endosulfan	33213659	0.02
Endosulfan Sulfate	1031078	0.01
Endrin	72208	0.05
Endrin Aldehyde	7421934	0.01
Heptachlor	76448	0.01
Heptachlor Epoxide	1024573	0.01
PCBs	1336363	0.01
Toxaphene	8001352	0.5

Table 2 - DLRs for the Title 22 Pollutants

Title 22 Pollutant	CAS No.	DLR (µg/L)
Aluminum	7429905	50
Antimony	7440360	6.0
Arsenic	7440382	2.0
Asbestos	1332214	0.2 MFL > 10 µm
Barium	7440393	100
Beryllium	7440417	1.0
Cadmium	7440439	1.0
Chromium		10
Cyanide	57125	100
Fluoride	7782414	100
Mercury	7439976	1.0
Nickel	7440020	10
Nitrate (as N)	-	2,000
Nitrate + Nitrite (sum as N)	-	-
Nitrite (as N)	-	400
Selenium	7782492	5.0
Thallium	7440280	1.0
Benzene	71432	0.5
Carbon Tetrachloride	56235	0.5
1,2 Dichlorbenzene	95501	0.5
1,4 Dichlorobenzene	106467	0.5
1,1 Dichloroethane	75343	0.5
1,2 Dichloroethane	107062	0.5
1,1 Dichloroethene	75354	0.5
Cis-1,2 Dichloroethylene	156592	0.5
Trans-1,2 Dichloroethylene	156605	0.5
Methylene Chloride	75092	0.5
1,2 Dichloropropane	78875	0.5
1,3 Dichloropropylene	542756	0.5
Ethylbenzene	100414	0.5
Methyl-tert-butyl-ether	1634044	3.0
Monochlorobenzene	108907	0.5
Styrene	100425	0.5
1,1,2,2 Tetrachloroethane	79345	0.5
Tetrachloroethylene	127184	0.5
Toluene	108883	0.5
1,2,4 Trichlorobenzene	120821	0.5
1,1,1 Trichloroethane	71556	0.5
1,1,2 Trichloroethane	79005	0.5
Trichloroethylene	79016	0.5
Trichlorofluoromethane	75694	5.0
1,1,2 Trichloro-1,2,2 Trifluoroethane	76131	10
Vinyl Chloride	75014	0.5
Xylenes	1330207	0.5
Alachlor	15972608	1.0
Atrazine	1912249	0.5
Bentazon	25057890	2.0
Benzo(a)pyrene	50328	0.1
Carbofuran	1563662	5.0
Chlordane	57749	0.1
2,4 D	94757	10
Dalapon	75990	10
Dibromochloropropane	96128	0.01
Di(2-ethylhexyl)adipate	103231	5.0
Di(2-ethylhexyl)phthalate	117817	3.0
Dinoseb	88857	2.0
Diquat	85007	4.0
Endothall	145733	45
Endrin	72208	0.1

Title 22 Pollutant	CAS No.	DLR (µg/L)
Ethylene Dibromide	8003074	0.02
Glyphosate	1071836	25
Heptachlor	76448	0.01
Heptachlor Epoxide	1024573	0.01
Hexachlorobenzene	118741	0.5
Hexachlorocyclopentadiene	77474	1.0
Lindane	58899	0.2
Methoxychlor	72435	10
Molinate	2212671	2.0

Title 22 Pollutant	CAS No.	DLR (µg/L)
Oxamyl	23135220	20
Pentachlorophenol	87865	0.2
Picloram	1918021	1.0
PCBs	1336363	0.5
Simazine	122349	1.0
Thiobencarb	28249776	1.0
Toxaphene	8001352	1.0
2,3,7,8 TCDD (Dioxin)	1746016	5×10^{-6}
2,4,5 TP (Silvex)	93721	1.0

Table 3 MLs for Fuel Oxygenates

Table 3 - MLs for the Fuel Oxygenates**Fuel Oxygenates**	CAS No.	ML (µg/l)
MTBE	1634044	0.5
DIPE	10823	0.5
TAME	994058	0.5
ETBE	637923	0.5
TBA	75650	5.0
Methanol	67561	1,000
Ethanol	64175	5.0

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

The Discharger shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.

B. Self Monitoring Reports (SMRs)

1. At any time during the term of this permit, the State or Regional Water Board may notify the Discharger to electronically submit self-monitoring reports. Until such notification is given, the Discharger shall submit self-monitoring reports in accordance with the requirements described below. Dischargers shall continue to submit hard copies of SMRs in addition to electronic submittals.

2. The Discharger shall submit quarterly and annual SMRs including the results of all required monitoring using U.S. EPA-approved test methods or other test methods specified in this General Permit. Quarterly reports shall be due on May 1, August 1, November 1, and February 1 following each calendar quarter. Annual Reports shall be due on February 1 following each calendar year.

3. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
Continuous	**June 29, 2006**	All	Quarterly Reports shall be due on May 1, August 1, November 1, and February 1 following each calendar quarter
1x / month	First day of calendar month following start up (new dischargers) or following the permit effective date (existing dischargers)	1st day of calendar month through last day of calendar month	
1x / quarter	Closest of January 1, April 1, July 1, or October 1 following the permit effective date	Jan 1 through March 31 April 1 through June 30 July 1 through Sep 30 Oct 1 through Dec 31	
2x / year	Approximately January 1 and July 1 of each year following start up (new dischargers) or following the permit effective date (existing dischargers)	January 1 through June 30 July 1 through December 31	
1x / year	Closest of January 1 or July 1 following start up (new dischargers) or following the permit effective date and at one year intervals thereafter	January 1 through December 31	
1x / 2 years	Approximately January 1 following start up (new dischargers) or following the permit effective date (existing dischargers) and at two year intervals thereafter	January 1 through December 31	

4. The Discharger shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the facility is operating in compliance with interim and/or final effluent limitations. Each quarterly SMR shall also include copies of signed laboratory reports for the reported analytical data.

5. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the waste discharge requirements and requirements of the Monitoring and Reporting Program; discuss corrective

actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.

6. SMRs must be submitted to the Regional Water Board, signed and certified as required by the standard provisions (Attachment D), to the address listed below:

   North Coast Regional Water Quality Control Board
   5550 Skylane Blvd., Suite A
   Santa Rosa, CA 95403

7. Monitoring data and reports shall also be submitted electronically to the State Water Resources Control Board's Geographic Environmental Information Management System database (GeoTracker) as required by Title 23, Division 3, Chapter 30, Article 2, Sections 3890-3895 of the California Code of Regulations).

C. Discharge Monitoring Reports (DMRs)

1. As described in Section X. B. 1, above, at any time during the term of this General Permit, the State or Regional Water Board may notify the Discharger to electronically submit self-monitoring reports. The Discharger shall submit hard copies of DMRs, even after electronic submittals are required, in accordance with the requirements described below.

2. DMRs must be signed and certified as required by the standard provisions (Attachment D). The Discharge shall submit the original DMR and one copy of the DMR to the address listed below:

   State Water Resources Control Board
   Discharge Monitoring Report Processing Center
   Post Office Box 671
   Sacramento, CA 95812

3. All discharge monitoring results must be reported on the official U.S. EPA pre-printed DMR forms (EPA Form 3320-1, available at http://www.epa.gov/earth1r6/6en/w/dmr.htm). Forms that are self-generated or modified cannot be accepted.

4. Monitoring reports and monitoring data shall also be submitted electronically to the State Water Resources Control Board's GeoTracker database as required by Title 23, Division 3, Chapter 30 of the California Code of Regulations